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by GEORGE F. TAUBENECK

Advice for the Gamblers Nothing Is 'For Sure' The Germans Cause Trouble Even In Peace Lin Yutang and Spengler You Know Who Gets it In the Neck The Law of Inequality

(Continued from Last Week) Advice for the Gamblers

Possibly we'd be better off not to know what's in store for us. If, after we have noted that the rhythm-curves which bear upon our future prospects all point downward, too many of us might be discouraged.

Contrariwise, when some of us learn that the odds are against us, maybe our compensatory adrenalin will flow extravagantly, and so we'll work overtime to prove that we can beat the odds! (In every generation of ME a few derring-doers do defy the "o r-all" trends successfully.)

Fore 'arned is forearmed, however; and wi is the man who studies the forms et before he places his bet.

Equ pped with a cursory knowledge and t iderstanding of the 54-year, 18-year, 9-year, and 3½-year cycles, the prudent businessman will have a leg up on his competitors. Taking into consideration the peculiar circums a ces of his won situation, he'll feel more confident whenever he decides to expand, lay off, hire, or promote and invest-if he has looked into the Cyclical Crystal Ball.

Take real estate, for instance. Shall he buy, build, or lease? If he rents, shall he enter into a short-term or long-term contract? A knowledge of the implications of the 54-year and 18-year curves of real-estate prices should be helpful to the executive who must decide whether to rent, buy, or build.

Most increases and decreases in real estate prices and rentals seem to occur on schedule-war or peace, inflation or deflation notwithstanding. This is one cyclical curve which seems to mean what it says. And 80, if it is utilized properly by the decision-maker of any organization, a knowledge of said "curve" will serve to reduce the risks of the chances

Nothing Is 'For Sure'

Critics of the theory that cyclical trends are inevitable and overpowerng love to tell you that certain industries, firms, and individuals seem to prosper while the great bulk of their compatriots are suffering.

Right. As pointed out earlier, the charting of economic, political, biological, and social cycles (by the cyclical phenomena priests) is based upon a review and appraisal and interpretation of the experiences of large aggregates of people and economic segments.

Big-time rhythms may manifest themselves in one industry months before they are tagged in another; and certain individual firms may never notice them at all. So it happens that:

Perhaps the most important factor in the success of any enterprise is

Knowing when to make a bid for a new job or an intrinsically valuable property is a God-given talent that can make an ordinary man rich.
(This talent is possessed, unfortunately by the black-market operator, the "bootlegger," and the stockmarket rigger, as well as by the suc-

cessful business man. . 2. It's probably true that if you must make up your mind fast, you should trust your experience to give you a quick instinctive answer to any prob-

(Continued on Page 8, Column 1)

DODE NARC Hits Contract Overlapping, Poor From Distributing

CHICAGO-Association policy on warranties, improved standards of quality in production, and suggested changes in architects' specifications for air conditioning were among the numerous subjects discussed by members and officers of the National Association of Refrigeration Contractors, meeting in the Hotel Stevens here last week.

It was a two-day session, an open meeting being held Sunday, Oct. 26, followed by a directors' meeting the following day. Sunday's session, the "annual" meeting, was opened and then immediately adjourned to next January, after which the group spent the rest of the day in open discussion.

The problem of overlapping subcontracts on heating, plumbing, and air conditioning in the construction field came in for considerable discussion after being introduced by R. D. Elgin, Little Rock, Ark., contrac-

"In our territory," he said, "there (Concluded on Page 29, Column 1)

F.R. Kohnstamm Joins Jahco as Sales Head

CLEVELAND - Frank R. Kohnstamm, sales executive who for 25 years was associated with Westinghouse Electric Corp. in Cleveland and Mansfield, has joined the staff of Jack & Heintz Precision Industries, Inc., as general sales manager, Edward R. Legg, vice president in charge of sales, has announced.

Mr. Kohnstamm started with Westinghouse in 1917, was appointed manager of the Appliance Section in 1922, in 1927 became assistant sales manager of the Merchandising Division. In 1931 he became director of merchandise for the Merchandising (Concluded on Page 32, Column 1)

Schreiber Named Gen. Mgr. In Gemco Shifts

ST. LOUIS-Norman B. Schreiber, Chicago industrialist, has been appointed board chairman and general manager of General Engineering & Mfg. Co. (Gemco) here, according to a company announcement.

It was also announced that: Willard R. Vogel has resigned as vice president and general man-

2. Five regional sales managers have been appointed by Mr. Schreiber

in a major development in sales plans. 3. Gemco's new "Miracula" heat pump will go into limited production within the next few weeks.

Mr. Schreiber is not related to John H. Schreiber, Gemco president. (Concluded on Page 32, Column 2)

Refrigerator Plant Head Gives Picket Line a Football

HUDSON, N. Y .- William T. Mc-Call, head of McCall Refrigerator Corp. here, has added something new to labor relations.

McCall's 115 workers went on strike. They threw a picket line around the plant. So Mr. McCall threw the pickets a football "to fool around with."

The going out there myself in a matter while and play football with them, the announced. "There's nothing to do in the plant."

The strike was called by Local 314,

United Electrical Workers (CIO), in a dispute over wages during newcontract negotiations.

Seeger Withdraws Commercial Credit Sets Appliance Materials at Meeting Commercial Lines

ST. PAUL - Seeger Refrigerator Co. here is withdrawing from the distribution of commercial refrigerator equipment.

One of the oldest names in the field of refrigerator cabinet manufacturing, Seeger is the producer of the "Coldspot" household electric refrigerator merchandised by Sears, Roebuck, and has also made some commercial refrigerator lines which were distributed by other firms in the industry.

A company official made the following statement on the withdrawal from the commercial sales field:

"We recently sent a letter to our distributors and dealers, advising them that Seeger merchandise would not be available to them after our present production.

"We have not been able to supply any of our customers with display cases, and only a portion of the reach-in refrigerators which they have required.

"Raw materials are still a bottleneck, and we have felt that rather than have our distributors and dealers continue to depend upon us for merchandise when our deliveries have not been adequate, we should withdraw our line and permit them to obtain franchises with other commercial outlets that may be in a better position to take care of this business.'

Brand Name Drive Boosts Sales In Small Mass. Town

GREENFIELD, Mass.-A special promotion of brand name merchandise, including electrical appliances, is currently being conducted here by manufacturers, distributors, and retailers in an effort to stimulate large sales and profits for merchants with lower inventories and a faster turnover of stock.

This experiment, according to some manufacturers, might spark off more demonstrations in other cities designed to prove that American manufacturing provides more goods at lower cost than any other system.

Backed by Brand Names Foundation. Inc. of New York City, the plan was originated by a pair of local merchants. It got under way on Oct. 20 and is scheduled to close on Nov. 5. During the first week of the experi-

(Concluded on Page 4, Column 3)

\$250,000 Fire Damages Weber Fixture Plant

LOS ANGELES - A fire which raged through two storage sheds and the yards of the Weber Showcase & Fixture Co. plant here Saturday night, Oct. 25, caused damage estimated at around \$250,000, plant officials declared.

A number of finished display cases and walk-in coolers which were awaiting shipment, were damaged by the blaze.

Bandits Nab \$110,000 Sturtevant Payroll

BOSTON-Six gunmen who held up the paymaster of the B. F. Sturtevant Co. Division of Westinghouse Electric Corp. in suburban Hyde Park here on Oct. 30 escaped with a \$110,000 payroll.

The Sturtevant Co. Division produces air conditioning equipment. The six bandits, one of whom wore a burlap bag over his head, got the payroll in what appeared to be a carefully planned robbery.

Commercial Cabinet Makers Will Try To Hold 'Tight' Credit

CHICAGO - Terms on sales of commercial refrigerators are not likely to be affected by the ending of Regulation W.

This regulation never actually covered commercial sales, and it may be questionable whether consumer credit conditions can serve as a barometer in the commercial field, except possibly as they affect the over-all national credit picture.

For the past two years many manufacturers of commercial refrigerators have been suggesting terms of 25% down with the balance payable in 18 months. This represented a tightening of the previous industry average of 20% down and 24 months.

During the war years some companies were getting 30% down and 12

Even if the industry is forced to relax its present terms in the near future (an unlikely prospect) it can return to the previous 20% and 24month basis, which was considered sound.

Time payment terms are not usually so important in the commercial industry as in the appliance field where the sale is directly to the ultimate consumer.

Much of the commercial equipment being sold today is channeled into the replacement market in the food retailing field, and store operators generally are in excellent financial shape, often paying cash.

Sales to newly established outlets, of course, may call for terms, which can assume some importance as selling points.

Business Bureau Acts To Curb 'Fictitious' **Trade-In Allowances**

NEW YORK CITY - "Fictitious" trade-in allowances on radios that are used to disguise inflated markups or substantial price reductions have roused the National Better Business Bureau to propose a national educational program warning the public of such practices, Kenneth B. Willson, operating manager, has an-

The national bureau's proposal will be heard at a meeting, to be held in the near future, of the merchandising committee of the Association of Better Business Bureaus, he declared.

Any action taken, though applying to radios now, might be extended to refrigerator trade-ins in the future, it was felt.

The meeting was called, Mr. Willson said, because the revival of misleading radio trade-in allowances has become serious enough to require action. It must be curbed before it (Concluded on Page 32, Column 4)

Rose Becomes Sales Manager at Schaefer

MINNEAPOLIS - Appointment of A. H. Rose as sales manager is announced by Harold L. Schaefer, president of Schaefer, Inc., manufacturer of ice cream cabinets, frozen food cabinets, and Pak-A-Way home and farm freezers.

Mr. Rose has been prominently identified in sales work nationally for over 20 years, the past five in the refrigeration industry. Previously he was for five years general sales (Concluded on Page 32, Column 3)

Air Conditioning and Commercial Term Sales Plans Also Revealed

Terms at 20% Down, 36 Months

BALTIMORE-Household refrigerators and all major appliances except radios carry a minimum 20% down payment with a maximum of 36 months to pay under post-Regulation W credit terms established by Commercial Credit Corp. here, Howard L. Wynegar, president, announced.

On radios, radio phonograph, and the like, the down payment is the same (20%) but instalments are limited to 24 months.

Terms on installations of commercial refrigeration, air conditioning, and laundry equipment are as follows:

Where the total sales price of the merchandise plus the installation expense is \$3,000 or less, 10% down with 24 months to complete the balance.

Where the total sales price of the merchandise plus the installation expense is over \$3,000, 20% with 36 months to pay.

(In both of these classifications, however, the minimum down payment must at least equal total installation cost.)

Where the down payment is 20% or more and regardless of the amount of the contract, 36 months' maturity.

Refrigeration equipment coming under these terms includes display cabinets, walk-in and reach-in cabinets, ice cream cabinets, beer dispensing equipment, beverage coolers, frozen food cabinets, milk coolers, and locker systems.

In disclosing the new terms, Mr. Wynegar said the company is carrying out its announced policy of "en-

Control Revival?

WASHINGTON, D. C. - Socalled "official sources" in the capital predict that President Truman will ask Congress to restore controls over consumer credit when it meets in special session Nov. 17.

As government controls ended Nov. 1, governors of the Federal Reserve Board protested in a special statement that "this is no time for relaxation of terms by banks, finance companies, and instalment sellers."

Declaring that demand for many durable goods specifically covered Regulation W is still far in excess of supply, the board contended that easier credit will not add to the supply.

"It can only intensify demand and accentuate the upward pressure on prices," it argued.

couraging the use of reasonable instalment terms in order to sell merchandise and in opposition to the practice of selling terms instead of merchandise." He noted that the terms modify somewhat those set up by the Federal Reserve Board under Regulation W.

Commercial Credit is one of the three largest sales finance concerns in the country. It has more than 300 offices throughout the United States and Canada.

Another leading sales finance com-pany, General Motors Acceptance Corp., proclaimed that the policy it established over 25 years ago will remain in full effect.

"It is best expressed in the slogan: 'Terms to suit your needs,' " explained John J. Schumann, Jr., GMAC president.

"We will neither advertise nor promote any specific terms, nor will we compete with other financing agencies on the basis of high-cost 'easy' terms. We are confident that, as in the past, those dealers with whom we do business will adhere to this policy as

STANDARD REFRIGERATION ITEMS

Any Quantity Subject To Prior Sale

255-1/4" Brass Flared Union Coupling Nut		
500-36" x 1/4" Brass Reducing Union F to F		
3676-38" S.A.E. x 1/4" I.P.S. Brass Half Union Coupling	0.09	"
1884-1/2" S.A.E. x 1/4" I.P.S. Brass Coupling	0.14	"
21301—1/4" Frostproof Flare Nut Brass	0.04	99
4082-1/2" Frostproof Flare Nut Brass	0.08	22
560-%" x %" x ½" Copper Sweat Tee		""
675—1/4" Copper Sweat Tee		11
39881/2" Copper Sweat 90° Elbow		"
17339 lbs. No. 525 Mastic Sealer		lb.
10400 lbs. Dry Asphalt (Enamelite) Type A #330		"
7480 lbs. Liquid Asphalt (Enamelite) Type A #330		11
20019 lbs. No. 446 Metallac Permagum		"
6375 lbs. Flexseal Type 80 N—No. 351 Asphalt		"
2000 lbs. No. O Korite		"
10636 pcs. Door Gasket rubber—98%"		00
13316 pcs. Door Hinge Brass Chrome Plated.	. 202	ca.
Stainless Steel Pin 6" x 2" x 1/16" Swedged	.52	00
1500 rolls—Forest Fleece Cotton Wadding—Black 3' x 75'		rolls
20 rolls 62" wide Plain Wrapping Paper—50# Kraft		roll
9090 Pes.—Sponge Rubber Tubing—1" O.D. x 56" I.D. x 53"		
4530 Pcs.—Sponge Rubber Tubing—1" O.D. x 5%" I.D. x 5"		
178 Pcs.—Tecumseh Condensers—FS-14— U 2 H ¼ H.P. Twin	.010	
Cylinder High Back Pressure Type, without Motors	39.67	ea.
2511 Pcs.—Expansion Valves—Detroit No. 894 Dura Fram Cap—	00.00	
1/2 Superheat 5 Max. Press. 15 Freon	3.42	ea.
3414 PcsRanco Switches-Type "B" Thermostatic Control Setting		
IN-1° F OUT-12° with Indicator #3 Position	1.88	ea.
380 Pcs.—Ranco Switches—Type "B" Setting: IN plus 39°		
OUT plus 29° F with Indicator #3 Position	1.88	ea.
7115 Pcs.—Panelyte—Refrig. Grade 260—Odorless		
.090 x 27% x 29-15/16	2.25	ea.
5622 Pcs.—Panelyte—Refrig. Grade 260—Odorless		
.090 x 26-11/16 x 29-15/32	2.30	ea.
2414 PcsA. P. Trap-Dri Dehydrators Model 410-A2 1/3 Ton-		
1/4" SAS Male Flare Inlet & Outlet—4% cubic Inches Silica Gel		ea.
4987 sheets—.051 x 24½ x 90 38 ¾ Hard Aluminum sheets	.24	lb.
12 sheets—.081 x 30 x 96 3S—¾ Hard Aluminum Sheets	.32	"
4951 sheets-24 x 60-16 oz. Tinned One Side-Copper		
36 sheets-24 x 72-16 Oz. Tinned One Side-Copper		
2538 sheets-24 x 90-16 Oz. Tinned One Side-Copper / to 5000#		lb.
793 sheets—24 x 102—16 Oz. Tinned One Side—Copper 5M-80M lbs.		lb.
478 sheets-24 x 120-16 Oz. Tinned One Side-Copper \ 80M-Total	.38	lb.
2272 sheets—30 x 96—16 Oz. Tinned One Side—Copper		
500 sheets-36 x 96-16 Oz. Tinned One Side-Copper		
Also, Fibre Glass & Wool Batt-Insulation Various Siz	es at	

Tremendous Savings.

Box 2544

Air Conditioning & Refrigeration News

NCRSA Inaugurates Nationwide Prize Contest To Enroll New Members

Round Trip to All-Industry **Exposition Awaits Winner**

MINNEAPOLIS-George B. Herman, president of the National Commercial Refrigerator Sales Association, has announced a nation-wide prize contest open to all members of the organization.

A special bulletin giving complete details of the contest has already been sent to all commercial refrigerator distributors and dealers who are members in the association.

The contest will close Jan. 26, 1948 with the announcement of the winner made at the annual banquet of the NCRSA in Cleveland on Jan. 27. The prize for the member enrolling the greatest number of new members will receive a complete round trip to the All-Industry Refrigeration and Air Conditioning Exposition in Cleveland.

The winner will have a choice of either traveling by plane or train. In the event he cannot attend, \$100 in cash will be a second choice.

Winners will be judged by points, 25 points for all new regular memberships and 15 points for all new associate memberships. Checks for a full years dues must accompany each new membership application.

Complete information regarding the contest may be secured by writing to the executive secretary, 116 N. 7th St., Minneapolis 2.

Don't Over or Under Sell Small Grocers. Educate Them, Equipment Dealers Told

Equipment Show for Local Butchers Suggested

DETROIT-Food equipment dealers—those men who sell refrigerated display cases, shelving, counters, meat slicers, and the like-have a great responsibility to the small independent grocer and should be charged with the success or failure of that grocer, Louis Shamie, editor and publisher of the Grocer's Spotlight, told the Food Equipment Dealers Association here last week.

"You can do anything you want with the small independent grocer,' Mr. Shamie said, "because he doesn't have the experience or the knowledge to know what he needs. He is helpless in your hands.'

Mr. Shamie appealed to the dealers not to oversell or to undersell the small grocer, but to supply him with the equipment he needs to do the best and most profitable job.

He won the hearty approval of the group when he urged the dealers to accept the responsibility of educating the grocer on how to use his equipment to its best advantage.

P. E. Daubenspeck, president of F.E.D.A., assured Mr. Shamie, after his talk, that his organization would give the idea its most serious consideration.

Alexander Bell, president of the Detroit Retail Meat Merchants Association, who was in the audience, rose to suggest to Mr. Daubenspeck that an equipment show be put on for butchers.

"It does no good to sell a butcher an \$800 to a \$1,200 display case and have him use it like a garbage can," Mr. Bell pointed out.

Walter Kostecki, who is currently building a new supermarket here, agreed with Mr. Bell, pointing out that many small food merchants, instead of attractively displaying a few representative choice cuts of meat in their cases, try to save money and toss in balonies, sausages, lettuce, and anything else they find.

"If the cases are going to earn money for them, they must be taught how to use them.

"Having a shiny white case in a store that has dirty walls, cockroaches, cats, and dogs in it is no good either," he declared.

"A grocers' association is too poor to handle such an educational program," he stated. "But the equipment dealers are operating on a level higher than the grocers. It would be a very good thing if they could put on such a program."

Mr. Shamie, in his talk, urged the equipment dealers to consider the grocer not as a customer, but as a partner in the food merchandising business. "Upon his success as a grocer lies your success as an equipment dealer," he said.

"If you overequip him, you are in trouble. If you underequip him, you are also in trouble," he asserted.

See that he is sufficiently equipped to do the best job possible and to make money from the equipment, he advocated. "Each piece of equipment in the grocer's store should \dot{q}_0 a job. No display of merchandise should hide another display of merchandise," he explained.

"I have known thousands of stores in my 41 years in the grocery busithat have purchased \$1,000 worth of equipment when their vol. ume of business only justified \$100

An overequipped store as well as an underequipped store can cause a grocer to go out of business, he said.

"I am not asking you to be philanthropists," he asserted. "I want you to be as selfish as you can be. If you look well after your own in. terests, you will find out how much money this grocer has to invest.

"If he has \$500 you will not take that as a down payment on \$3,000 worth of equipment and to hell with the rest. You will make no profit on the sale if you have to come back and take the equipment out a few months later.

"It is much better to sell him what he can afford and what will make the most money for him. Then when he has made more money he will be able to buy more equipment. And you can come back and sell him.

"By helping the grocer to make more money, you will make more money yourself."

Mr. Shamie declared that an association of equipment dealers that had a good code of ethics and required its members to do business within that code could be a strong force for good in the trade.

"The grocer who knows you belong to such an association will much more readily put his faith in you and trust you to do the best job for him," he asserted.

"The more successful grocers you see around the country, the more you can glory in the knowledge that you have done a successful job. The more failures you see, the more your conscience should hurt you in knowing that you have done a poor job," he concluded.

REWA Region Opens Meet To Mfrs., Representatives

DETROIT - Originally announced as a closed affair, the meeting of Region No. 5, Refrigeration Equipment Wholesalers Association, at French Lick, Ind., Nov. 7 and 8, is open to manufacturers, manufacturers' representatives, and the like, according to an announcement by Elmer Davey, secretary of Region

All REWA members are invited to attend the meeting at French Lick hotel, particularly those of Regions Nos. 6 and 7. Reservations should be made with the hotel.

A full program of sports and special events is planned, in addition to the regular business session.





What's ahead?

Up the line . . . barely out of sight is 1948.

For the retailer who moves ahead with the Kelvinator Franchise, the right-of-way to success is laid out as straight as human planning can make it.

With consumers soon to be weighing values and shopping more carefully, Kelvinator's prestige and reputation for building products of unsurpassed quality and trouble-free performance become greater assets than ever. And the soundness of Kelvinator's policy of delivering extra value—year after year—assures a continuing sales advantage in a competitive market, with consistently higher dollar volume as a direct result of Kelvinator's famous Step-Up Plan.

For those who hold the Kelvinator Franchise, two other great sales levers will pay rich dividends in the days ahead. First, national advertising that has made the name, *Kelvinator*, synonymous with quality and extra value. Advertising that is supported unstintingly with local sales promotion. Second, the great Vocation-In-Sales program that gives the Kelvinator retail salesman the product-knowledge and skill so essential to selling confidence and selling success.

Another day-in and day-out asset of the Kelvinator Franchise is its basic provision: "An adequate market for every dealer . . . an adequate dealer for every market." The enduring advantages of this policy—uncrowded territories with maximum opportunity to capitalize on energy, ingenuity and resourcefulness—will be enhanced still further when the 1948 Kelvinator models are unveiled!



Mainline, New York, New Haven & Hartford R. R.



You build a future with Ballementor

THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY

DIVISION OF NASH-KELVINATOR CORPORATION . DETROIT 32 . MICHIGAN

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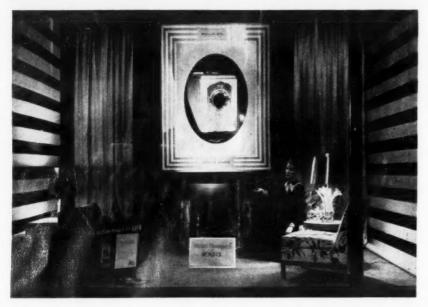
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Top Window Display In Its Class



This photo shows the window display entered in the Bendix competition by the Halle Bros. Co., Cleveland. It took first place in Group 2.

Bendix Picks Winners In National Display Contest

NEW YORK CITY—A nation-wide window display contest for dealers of Bendix Home Appliances, Inc., ended Oct. 22 with the announcement of winners at a meeting of the judges in the Savoy-Plaza hotel. The 393 entrants, divided into four marketing groups, built their displays around replicas of the gold and silver-trimmed 1,000,000th Bendix automatic washer. Winners were:

First Group—Philadelphia Electric Co., first; Electra City, Los Angeles, second; Chapman's, Inc., Saginaw, Mich., third.

Second Group—The Halle Bros. Co., Cleveland, first; Wichmann Furniture Co., Appleton, Wis., second; C. T. Sherer & Co., Worcester, Mass., third.

Third Group—Hecht Bros., Baltimore, first; Calcasieu Lumber Co., Austin, Tex., second; The Hecht Co., Washington, D. C., third.

Fourth Group—Elder & Johnson Furniture Co., Dayton, first; F. & R. Lazarus Co., Columbus, Ohio, second; Bangor (Me.) Hydro-Electric, third.

'Brand Name' Drive Proves Sales Booster

(Concluded from Page 1, Column 3) ment, cooperating dealers reported sales increases ranging from 30% to 100%.

Olan F. La Pierre, owner of La Pierre's Electric Shop, declared that partially as a result of special shipments of refrigerators, ranges, electric home laundry equipment, and radios, his sales jumped \$1,000 during the week.

H. W. Bonneau of Wilcox Appliances, Inc. declared that the experiment has been an excellent opportunity for merchants to eliminate confusion over brand names.

"It gave us a chance to explain that the name Frigidaire is the exclusive property of General Motors, whereas many people thought that any electric refrigerator made was a Frigidaire," he stated.

David Bartlett, men's clothing merchant and one of the originators of the plan, explained that manufacturers had cooperated wholeheartedly in the campaign by shipping in inventories of scarce goods, advertising in local newspapers and over the radio, and supplying window displays.

During the campaign a great all out effort is being made to focus public attention on quality, utility, value, and durability of brands.

To this end, manufacturers, distributors, and dealers are conducting sales schools, contests, consumer educational meetings, newspaper advertising, window displays, trade shows, demonstrations, radio publicity, outdoor spectacles, and other entertainments.

Big Stores May Go To '10% Down' Plan

NEW YORK CITY—Most of the merchants taking part in a recent panel discussion of credit terms before the National Retail Furniture Association indicated they will require a down payment of 10% on major appliances, furniture, and home furnishings, and allow a maximum period of 18 months for payments.

Relaxation of terms to a down payment of 10% would be felt most strongly in major home appliance lines, the majority of speakers agreed.

Kenneth Richmond, vice president and treasurer of Abraham & Straus, presented a schedule which was regarded as likely to be the yardstick for many New York retailers. He said his store would ask a down payment of 10%, with the following length-of-contract terms:

In home furnishings and allied lines, 12 months on purchases up to \$150; 15 months on those up to \$300; and 18 months on those over \$300. In apparel and jewelry, 6 months on purchases under \$100 and 12 months on those over \$100. Rate of interest would be ½ of 1% a month of the total purchase price.

Gus Axelrod, director of the Retail Merchants Credit Association of Philadelphia, said his association was pledged to "prevent both the consumer and the merchant from overloading on credit.

"We are going to continue to ask for a reasonable down payment and we are going to watch our risks," he declared. "We want to avoid the responsibility for a recession—if it occurs—through over-extension of credit."

Belief that credit terms would depend on the individual retailer was expressed by H. M. Short, president of Mecklenburg Furniture Shops, Inc., Charlotte, N. C. He pointed out, however, that a survey by the National Retail Furniture Association "showed a strong tendency to continue to demand a down payment of at least 10%."

Moderator of the panel discussion was James B. McMahon, Jr., executive vice president of the Associated Furniture Dealers of New York, who warned:

"Any promiscuous abuse of credit

terms in an effort to outdo competitors will unquestionably result in lowering advertising standards.

"Before Regulation W was in effect some of the most excessively liberal credit offers were featuring exceptionally low-priced goods as bait for selling over-priced merchandise. This does not mean that all firms offering such terms were guilty of that practice, but many were."

Kansas City Dealers Oppose Loose Credit

KANSAS CITY, Mo. — Leading household appliance and furniture dealers in this area are unanimously opposed to "dollar down, dollar a week" credit purchases but they hold somewhat varied views on specific terms.

So it appeared from talks at a recent meeting of representatives of 23 of the larger outlets.

A representative of one of the large mail order houses told the group his company will go to a 10% down payment and extend maturity to not more than 18 months.

The spokesman for a big downtown furniture store said its policy would be to seek a 20% down payment with instalments limited to 15 months.

with instalments limited to 15 months.

But Charles Tucker, head of Tucker
Furniture Co., operator of several
stores here, expressed the opinion
that no set schedule would obtain.

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Consolidated Edison Terms Vary by Purchase

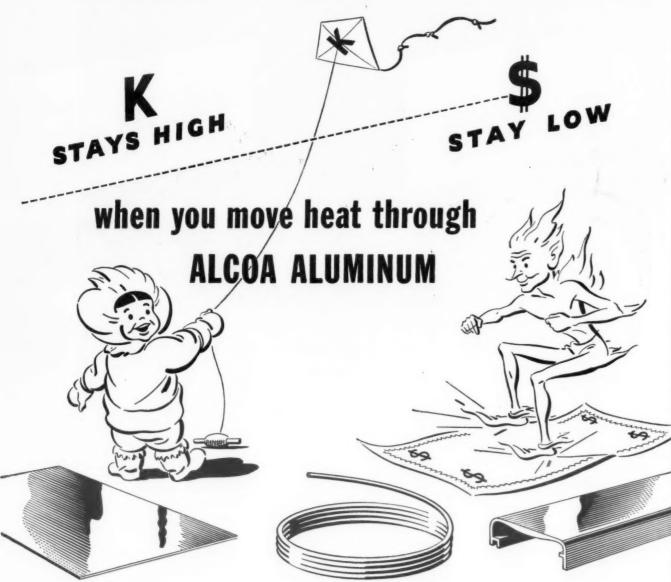
NEW YORK CITY—Credit terms to be used for the Consolidated Edison—cooperating appliance dealer—bank and finance company finance plan were announced as follows by E. F. Jeffe, utility vice president:

On refrigerators, gas and electric ranges, washing machines, and ironers: 20% minimum down payment and 36 months to pay.

On dishwashers, room air conditioners, sewing machines, suction cleaners, radios, phonographs, radiophonograph combinations, and other major appliances: 25% down and 18 months to pay.

On television sets: 25% down, installation costs, and 18 months to pay.

These terms were recommended by the American Bankers Association.



The value of k for Alcoa Aluminum is 1,509 Btu/hr./ft. 2 /in./degree F. And the cost of Alcoa Aluminum these days is *low*, much lower than you'd guess if you haven't priced it lately. What's more, you can get it now! In *all forms* . . . tubing, sheet, extruded shapes, and the other commercial forms.

You save money when you fabricate Alcoa Aluminum. It's light to handle in the shop ... weighs only ½ as much as steel or brass or copper. Use your standard machines and tools to work Alcoa Aluminum. Shipping and erection costs are less.

One of Alcoa's 54 sales offices is near you. Let us tell you more about Alcoa Aluminum, give you prices on the shapes you need. Aluminum Company of America, 1975 Gulf Building, Pittsburgh 19, Pennsylvania.

MORE PEOPLE WANT MORE ALUMINUM FOR MORE USES THAN EVER



FIRST IN

EVERY COMMERCIAL FORM





To Sell Freezers:

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Fill Prospects Full of Frozen Foods & Facts

MILWAUKEE - If you want to sell food freezers, fill your potential customers full of frozen foods and information.

That's the advice of Edward Janecek, sales manager for Lappin Electric Co., Milwaukee distributor of Whiting freezers.

Mr. Janecek should know whereof he speaks, for he is doing just that. More specifically, he is promoting freezers by means of a series of free frozen food banquets for prospects in various communities throughout Wisconsin.

The plan is simple but effective: About eight meetings a month are held, with an average attendance of 150. Each meeting is "sponsored" by a local Whiting dealer, who invites potential customers. Mr. Janecek and other members of the Lappin organization show up at the appointed time, together with a Whiting refrigeration engineer and a food consultant.

Guests are treated to a dinner consisting entirely of pre-cooked frozen foods. A typical menu would include onion soup, potato and cheese patties, chicken a la king, chocolate pie, pear gelatin salad, biscuits, and blueberry

Before and after the meal, an informal "school" or "clinic" demonstration is conducted. During these sessions, the refrigeration expert and food consultant explain the methods of preparing foods for freezing and cooking techniques employed.

Result? Guests sally forth to spread the good news. In almost every case, local newspapers, attracted by the novelty angle, play up the ban-

"And," Mr. Janecek claims, "our organization is now selling 10 times as many freezers as any distributor in Wisconsin."

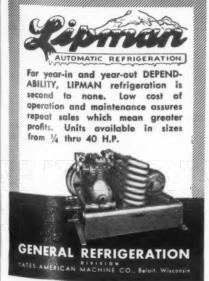
To Merge Anchor, Round Oak As Stratton & Terstegge Unit

LOUISVILLE, Ky .- The Round Oak trade name and patterns, inventory and supplies for gas and electric ranges manufactured under that name have been purchased by the Anchor Stove & Range Co. of New Albany, Ind. from Dowagiac Foundry division of the Kaiser-Frazer Corp., it has been announced

Wilton Terstegge, president of Stratton & Terstegge Co., Inc. here stated that both the Anchor and Round Oak companies would be combined in a local plant and operated as a subsidiary of his firm.

45 Years in Family -- Store Sold

CRESCO, Iowa-The Ben Smith Electrical Appliance Store, which has been in the Smith family for 45 years, has been sold by B. E. Smith to Terry Watros, who is managing it.



CLARK BRIDGMAN CO. 549 W. WASHINGTON BLVD. CHICAGO 6, ILL.

Sales and Engineering Product Coolers, Evap. Condensers

Air Conditioning, Liquid Coolers Water Chillers, Heat Exchangers Liquid Receivers

A. Reed, 14 Poplar Park, Pleasant Ridge,

R. R. Gragory, P. O. Box 184, Easton, III. R. E. Kenney, 4243 Crocker Ave., Minneapo

Dealers Warned on Bogus Trade-In Ads

CINCINNATI - A flat trade-in allowance offered for an old radio or other appliance which disregards age, condition, or fair market price of the trade-in item "for the purpose of disguising the true retail price, or creating a false impression that a reduced price is obtainable only by such a trade-in" is a fictitious tradein allowance, the Cincinnati Better Business Bureau ruled recently.

In a special bulletin, the bureau also recommended that where merchants offer free items with other purchased items, they use the phrase "included with" instead of "free."

The bulletin pointed out that the Federal Trade Commission has made it entirely clear that it considers as unlawful any use of the word "free" where there is an obligation to purchase some other article or to render some service, or where there are any conditions or strings attached to the

COMPLETE LINE

ONE FOR EVERY USE

MODEL 110-10 cubic

foot capacity. Ideal

for those wanting large

Home Freezer!

MODEL 50-Shown above. 5.2 cubic foot capacity. Ideal for average family!

MODEL 30-R-30 Cubic

Foot Freezer. Combination

Home Freezer and Frozen Food Storage Cabinet.

MODEL 200-Walk-In

Freezer-Cooler, For

large homes, farms,

estates, restaurants,

resorts. Freezer - 23

cubic foot capacity.

Cooler-100 cubic foot capacity.

5-Course Meal In 30 Minutes & 12 Steps— Frozen Food Foundation Tells How It's Done

SYRACUSE, N. Y. - In just 30 minutes after she enters the kitchen, the housewife can be calling the guests to a full-course dinner or luncheon-if she uses frozen foods.

How it's done is described in a bulletin put out by the home economics staff of Frozen Food Foundation here. Titled "Quick and Easies from the Freezer," the bulletin shows that frozen foods can take much of the drudgery out of daily meal preparation and help work some pretty fancy food magic without lengthy study of cookbooks.

For example, here's a suggested five-course, 30-minute dinner composed entirely of frozen foods, with the exception of coffee:

Orange juice with lemon sherbet, chicken a la king on baking powder biscuits, buttered peas and cauliflower, lime-and-pear salad, orange layer cake, ice cream, and coffee.

And here are the Foundation's directions for preparing it:

"1. Remove frozen orange concentrate, chicken a la king, biscuits, vegetables, salad, and cake from zero cabinet or from freezer compartment of refrigerator. Place orange juice under slowly running water and remove salads from package to defrost.

"2. Place frozen chicken a la king package under slowly running warm water to defrost. If package is spiral wrap, simply 'peel' container away from contents.

"3. Start heating water in bottom of double-boiler and place chicken a la king in top section to warm.

"4. Remove frozen cake from carton; place on cake rack to defrost.

"5. Prepare frozen biscuits according to instructions on package. Frozen baked biscuits take only eight minutes to heat.

"6. Now check the chicken a la

king in the double-boiler and gently separate the chunks to assure fast, even heating.

"7. Put water on to heat for vegetables; start coffee; set table.

"8. Remove salads from their individual paper cups and place on beds of lettuce. A short dip in warm water makes cups come off fast.

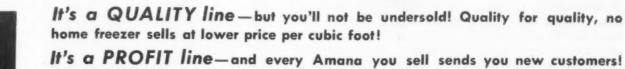
"9. Now put frozen vegetables in boiling water to cook; the peas go in first, then two minutes later, the cauliflower. Allow total cooking time of five to eight minutes for both. Gently separate vegetable particles during heating, to allow even, fast cooking.

"10. Cut the defrosting orange juice into four or five chunks, place in pitcher, and add water according to instructions on package. Pour juice back and forth from one container to another to aerate it, improving the flavor. When the frozen chunks are dissolved, put pitcher in refrigerator

dissolved, put pitcher in refrigerator. "11. Cut cake and place on serving plates. Though still frosty, cake will be ready to eat by dessert time.

"12. Place one scoop of lemon sherbet in each glass, fill with juice."





It's that kind of a home freezer! It's a GUARANTEED line - 5-year warranty on sealed-in mechanism -5-year insurance against food spoilage!

BETTER TIE UP WITH AMANA . . . AND BE IN BUSINESS TO STAY!

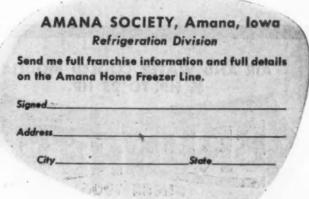
For Full Franchise Information, Wire, Phone, or

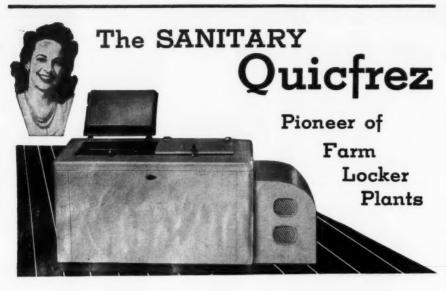
MAIL THE COUPON!

Amana Society

Refrigeration Division: Amana, Iowa

Pioneer specialists in low temperature refrigeration, with a century-old tradition of fine American craftsmanship.





\$AVES the Food Dollars!

WHEN the actual dollars-and-cents value of food stored in a freezer is considered, it is easy to convince your freezer prospects of the wisdom of buying the best! In featuring the Sanitary QUICFREZ, you offer performance and quality that insure lasting service and satisfaction-backed by over 8 years of pioneer development in the farm freezer field.

PROFITABLE Quicfrez Dealer Franchises are available. Write or wire for full particulars.

STAND-OUT FEATURES of the Quicfrez

- 5 Separate freezer plates which provide 4 Storage Compartments.
- More Convenient to usedue to separate compartments for foods.
- Steel welded frame moisture-proof sealed Cabinet, with 5" Glass wool insulation in walls



THOUGHTS FOR MERCHANDISERS

Dept. Store Offers Freezer Dealers Tie-In With Frozen Foods Home Delivery Service

COLUMBUS, Ohio - Operating under the Frostmaster plan for the promotion of home freezer and frozen food sales, Morehouse-Martens, department store here, is now offering other appliance dealers throughout the city a similar plan for delivery of frozen foods to purchasers of

"Just as you won't buy razors if you can't buy blades to fit, so it's hard to sell freezers unless you offer the frozen foods to go in them," dealers are being told by Art Stiffler, who heads up the freezer-frozen foods operation for the department store.

"Leaders in the major appliance field say if you can get a woman to once use a freezer, she won't part with it," says Mr. Stiffler.

"The big problem today in selling home freezers is setting the customer up in business immediately. Otherwise, if the box stands idle, there is a good chance that disatisfaction can creep in and the customer wonders whether the purchase was worth the

money spent. "A functioning, efficient home service is a good talking point for the appliance dealer who is trying to make a sale," he tells the dealers.

The Morehouse-Martens plan for dealers provides the following:

"The frozen food service works closely with each appliance dealer in the timing of the initial food delivery. The frozen food arrives the same day the pre-cooled box reaches the cus-

To provide home delivery service on frozen foods, Morehouse-Martens, department store in Columbus, Ohio, maintains three refrigerated trucks, two large bulk storage rooms, and the order-filling room above. Here are the six Carrier cabinets (each of which provides about 30 cu. ft.) from which individual orders are filled after being received over the 'phone.

"Each dealer immediately notifies the frozen food service of each freezer sale.

"The frozen food service contacts the purchaser. For the housewives who are not certain what foods and what quantities to order for their freezers, the saleslady will recommend a special combination pack-

It's still too soon to determine dealer reaction to this offer, says Mr. Stiffler, but he believes there'll be considerable acceptance.

"Home delivery of frozen foods is a splendid selling tool," he asserts. "We've put out hundreds of freezers on the basis of our offering home frozen food deliveries."

Just going into its second year with the Frostmaster plan, Morehouse-Martens has found the acceptance "wonderful," declares Mr. Stiffler.

"Columbus had been somewhat backward as far as home freezers and frozen foods were concerned, and the dealers themselves weren't fully conscious of the possibilities offered by frozen foods," he adds.

'We've had to promote the whole frozen food industry here, and today Morehouse-Martens is thought of as the frozen foods store in Columbus."

DEMAND FORCED OPENING OF RETAIL DEPARTMENT

Besides the home delivery service, the store also operates a retail frozen food department on the first floor of the main store. This was set up some time after the Frostmaster plan was instituted because the store found that numerous customers were coming over to the warehouse to make purchases while they were downtown.

Headquarters of the frozen food operation are maintained in a separate warehouse where Mr. Stiffler has his office, telephone orders for frozen foods are taken, and the storage and order-filling of frozen foods are made.

Most of the soliciting for home deliveries is made via telephone, with four order-takers working in separate

Starting about 1 o'clock in the afternoon, these orders are put up in boxes and stored for delivery according to the schedule that has been established. Actual filling of orders is performed in a large room at the rear of the warehouse where there are six large Carrier frozen food providing approximately cabinets 30 cu. ft. of storage each.

After the orders are filled in boxes, they are sent downstairs to the basement on a conveyor for storage in the two large bulk walk-in frozen food rooms until they are loaded on the trucks for delivery. Trucks are loaded at night.

Three refrigerated trucks are employed for home deliveries, a new one just having been added. first two trucks were fully insulated jobs, but the latest one is fitted with a large insulated storage cabinet maintained at -10° F. by a 1/2-hp. Curtis air-cooled unit connected to eutectic plates. The unit is plugged in at night at the warehouse to "charge" the plate.

The trucks follow a regular delivery schedule. On Monday they make deliveries in the Bexley district; on Tuesday, Grandview and Arlington; on Wednesday, West,

Hilltop, and East Columbus; Thursday, Clintonville; Friday, Arlington, and Saturday, North Columbus.

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Although the frozen food department works closely with the sales of freezers by the store, these are actually handled by the major appliance department. In addition to the Frostmaster, the Deepfreeze line is also carried. Representatives of the frozen food department, however, are always on hand in the major appliance department to help in promoting the frozen food delivery service as a selling tool for freezers.

Incidentally, Mr. Stiffler contends that in trying to sell "freezers" to city dwellers, dealers are hitting at the wrong thing.

"Few city dwellers have gardens and there are really few things that they can freeze," he asserts. "What they really need are frozen foods."

The frozen foods department maintains three sales representatives to contact customers for this delivery service. They spend part of their time on the floor of the major appliance department and the rest of their time following up leads and cold canvassing.

With the addition of a third truck, more facilities for deliveries are being provided, and Mr. Stiffler expects these representatives will be bringing in more new customers.

Frequently Morehouse-Martens puts on a promotional drive that involves "sample distribution" of frozen foods to prospective users.

This helps create the need for home freezers and frozen foods," says Mr. Stiffler, who points out "more people have bought freezers after using frozen foods than the other way around."

ELDERLY COUPLE 'NEVER ENJOYED ANYTHING MORE'

He likes to cite a recent example, however, that goes somewhat contrary to this belief, but does highlight the sales potential for freezers.

"Not so long ago an elderly couple was sold a home freezer by a salesman in the major appliance department. Personally, I wouldn't have thought this sale would stick.

"In fact, our home economist called on them soon after the sale and reported that she would be surprised if these people kept and used the freezer.

"Not so long ago, this man called in and began asking me a lot of questions about the freezer and frozen foods. I suspected he was going to tell us that he wanted to return it. But instead, he said,

"'You know, Mister, we've never had anything else in the house that we've enjoyed more.'

Another satisfied user of frozen foods recalled by Mr. Stiffer is a blind woman, who, he reports, says that with frozen foods she doesn't have to worry about whether she has completely cleaned fruits and vegetables when preparing them for cooking.

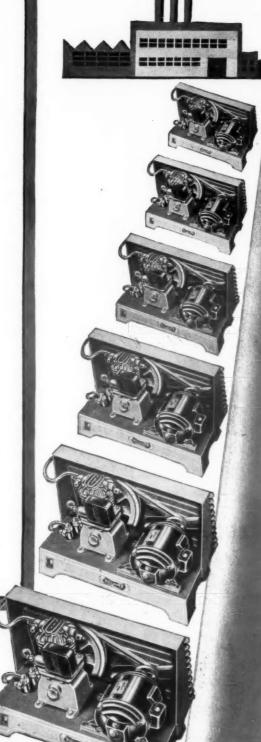
"I think that right now," concludes Mr. Stiffler, "we're right in the beginning of this frozen food business. We're where the automobile business was back in 1918.

"A lot of factors in the frozen food industry have tried to capitalize quickly on this new field, but now the people are settling down. They've realized that this is no gravy train They have to go out and sell."



BRUNNER MANUFACTURING CO.

Utica 1, New York, U.S.A.



AIR AND WATER COOLED MODELS 1/4 HP. TO 25 HP.

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Field Report

What are dealers, distributors, servicemen, and the others on the industry's front lines thinking about today? These "Field Reports"—extremely popular in prewar days—now give News readers the latest ideas of the men closest to the all-important consumer.

Air Conditioning Advertising Aimed at Separate Professional, Commercial Groups Increases Sales

NEW YORK CITY—The volume of new air conditioning installations in New York City thus far this year may possibly be the greatest in history, but—it still is below expectations of what most dealer-contractors thought it might have been, according to an official of Consolidated Conditioning Corp., one of the largest such outfits in the metropolitan area.

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"Last year," said the Consolidated official, "all you had to tell prospective buyers was that you had the equipment, and you had a sale.

"This year, we've had to do some hard selling, and in many cases, after finding out the cost, the prospect has said—'Can you just put in the ductwork? and we'll take the rest of it next year.'"

This year Consolidated, through its promotion and the efforts of its salesmen, turned up 4,000 "very live" prospects for air conditioning. How many of these became buyers was not revealed, but Consolidated is said to have marketed about 350 ½-hp. window-type room air conditioners, and "around 200" of store-type conditioners in the 3 and 5-hp. sizes. These were sold by Consolidated and its dealer organizations, which extend through Westchester County and Long Island as well as in New York.

The window-type room units were sold mainly for offices and individual apartments, by Consolidated's own sales forces. Doctors and dentists were the biggest buyers, with lawyers turning out to be very poor prospects.

By far the biggest majority of those sold for residential users went to apartment-house dwellers.

Interesting angle on the sale of the store conditioners was that the Consolidated dealer organization sold more of them than the firm's own selling organization.

The dealer organization is a test of a distribution theory on air conditioning which many have talked about, but few have actually tried. They have franchised a considerable number of dealers to sell the lines they handle, and many of these are small "servicing contractors" of the one-man or two-man type.

"Many of these men have established contacts with restaurants, bars, stores, and other commercial establishments that they can tap," said a Consolidated official. "And because their income depends on their own efforts, they get out and hustle for business."

The dealers can get all the engineering assistance they need from the company. Consolidated is training 14 men, all of whom have engineering degrees, under a GI training program, and this group of men can give the dealers all the assistance they need.

Installation of the equipment will also be made by the distributor if the dealer so desires. However, many of the dealers prefer to do their own installation work.

A few restaurant supply houses also function as dealers for Consolidated, employing their close contacts with restaurants to furnish the "whole ball of wax" in a remodeling program.

Consolidated Conditioning Corp. handles a wide range of commercial refrigeration equipment as well as various air conditioning lines, but tends to keep the two operations pretty separate.

The air conditioning sales operation is split into three general divisions: (1) industrial; (2) installations from 2-hp. up to industrial sizes; (3) jobs under 2 hp.

The industrial division has a small number of salesmen who are men with long experience in contacting architects, builders, etc. and who can be relied upon to turn up a substantial number of jobs in the industrial and new building field. They work with the firm's project engineers in following through on these jobs.

The division handling the 2-hp. and larger jobs does most of the commercial and store conditioner installations. The under 2-hp. group employs the "transient" type of salesmen who sell equipment high in demand in the summer and switch over to "winter demand" items the rest of the year.

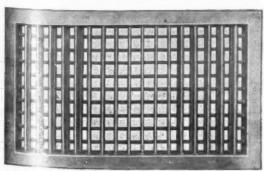
This division employs about 10 salesmen in the summer, and they also sell water cooolers, giving them a "double shot" at their prospects. In the winter this sales force drops to three or four men.

Consolidated believes that in the New York area specialized promotion efforts pay off best. That is, rather than generalized consumer advertising, special campaigns are aimed at individual professional groups such as doctors, lawyers, or select commercial prospects such as restaurants, specialty stores, etc.

Unless some terrific slump in general business conditions is experienced, Consolidated thinks 1948 should be a big year for air conditioning. For one thing, the extended hot spell that hit the New York area late this past summer made many an owner of a commercial establishment say "never again will we go through another summer without cooling."

The air conditioning business in Brooklyn was for his company, at least, almost as brisk as the business done at Ebbets Field, relates Ted Reina of M & R Refrigeration, Chrysler-Airtemp dealer for Brooklyn.

"We sold about everything we could handle," he said, "and we have orders for jobs to be completed before the start of the next season. Most of the demand was for the packaged store-type conditioners, and there was no particular type of market that was outstanding—we sold them to restaurants, wearing apparel shops, bowling alleys, bars, and other commercial establishments."



ALTON AIR SUPPLY GRILLES

TYPE "R" GRILLE

IMMEDIATE DELIVERY ...

Alton Grilles give you even distribution, uniform velocity, minimized resistance and noise elimination. Attractively designed units that harmonize with modern construction. . . tough all-metal welded casings for flush mounting in wall or duct. Each "tear drop" designed blade, individually adjustable for 4-way direction control. "Specially designed for Refrigerated Air Conditionion"

"Specially designed for Refrigerated Air Conditioning"
WRITE TODAY FOR COMPLETE INFORMATION FOLDER AND PRICES

ALTON MANUFACTURING CO.

Cooling and Ventilating Equipment

NUMBER FIVE *

Unity Abroad

ALES OF OUR air conditioning units abroad will bestow upon American diplomats and businessmen a great many secondary benefits which might not seem apparent at first glance.

For example: Export men, colonizers, and diplomats from the northern hemisphere have always been plagued by life in the tropics. Their efficiency and productivity are impaired when they have to labor in the Torrid Zone. They are able to work but a few hours a day, and less than 12 months per year, when they are subjected to the enervating influence of hotter climates than those to which they have become accustomed at home.

Just imagine how much better they will be able to do their job of developing the rich tropical lands—of "exploiting" (to use an unpopular term) the vast productivity of those countries where vegetation luxuriates and man deteriorates—when they can sleep in air conditioned rooms, work in air conditioned offices, and factories, and think without being distracted by the insufferable climate.

Surely, international understanding will be furthered when diplomats from many climes can confer as equals in air conditioned comfort.

Such luxurious possibilities for the diplomat and the export man, of course, are but incidental to the main opportunity at hand for our industry.

Air conditioning in itself could become an eye-opener for policy makers of other nations who are exposed to its blessings. Foreign diplomats might even be wooed away from Communism, Socialism, and Feudalism into the arms of Free Enterprise when they learn for themselves at first hand how the American Method—as represented by our singularly American air conditioning systems—ups the standard of living for all populations which are exposed to its boons.

If and when that time ever comes, the air conditioning business should be ready to supply enormous export demands for its output—and, incidentally, it should be ready to take a modest profit.

All over the world a healthy upsurge of desire and demand is now being created for American air conditioning units. Pessimists might think that the product of our industry could stand scant chance of consideration in the controlled import lists drawn up by the all-powerful governments which attempt to run the lives of desperately poor peoples. But the citizens of these poverty-stricken nations won't be denied their deepest desires. They seem to want America's air conditioning equipment even more than they do our automobiles. And unless they can get what they want, they won't work.

Because our industry is the world's only producer of unit air conditioners, we'll have little more than token competition from other exporting nations in our attempt to satisfy the world's needs for our public service products. However, if we proceed to fulfill those needs to the best of our abilities, we may serve well the cause of World Peace and Prosperity.

Air conditioning can become an American "ambassador of good will" to the world at large.

This is one of a series of 26 advertisements dedicated to the progress of the entire air conditioning industry by

NEVINGER MFG. CO., INC. GREENVILLE, ILLINOIS

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

An awareness of cyclical incidence, however, will help any ambitious fellow to be ultra-bright competitively over the long pull.

Only five or six men, we are told, understand the Einstein theory. That's too bad, really.

It may be that the whole of Time, from its dimly-seen beginnings down to the end of eternity, is spread before all of us-as Einstein argues on an ethereal television screen. (Now there's a hot topic for cocktail-party conjecture.) If we were just smart enough to find this Alley Oop "time machine," Einstein we could command the argues. secrets of the universe.

But we humans actually are in contact with only one instant of Time during any moment of our existence—just as only a few inches of the bicycle wheel touches the surface of a road as it rolls along. To believe that we can ever "see" all the present and the future is a thought which staggers the imagina-

Events do not just happen, according to Einstein; we merely come across them.

Do you suppose he's right? Well, the Cyclists think so!

More damaging by far to presentday civilization than the wars started by Kaiser Wilhelm and

Hitler have been the teachings of certain library-protected Teutonic philosophers-whose books overturned standard values all over the These Germans and their world. theories have caused mankind to lose confidence in Reason, Free Will, and Self-Determination.

The Germans Cause Trouble Even In Peace

Marx and Engels fostered Fascism and Communism-which are the negatives of Freedom and Democracy. Saintly Einstein's new laws of physics make ordinary men feel helpless. Freud taught that emotions rule the will, and that the sex-drive is far more important than sheer intellect or logic as a key to behavior.

And Oswald Spengler, the most convincing of the Germanic historical philosophers, gladdens the hearts of the fatalistic Cyclists. In his monumental, two-volume tome, "Decline of the West," he cites the "uncontrollable wave" theory of historical cycles to predict that barbaric oriental hordes soon will engulf the Anglo-American world, just as the Germanic and Islamic savages once strode over the ancient Roman Empire.

Spengler didn't enjoy access to scientific cycle-studies like those which have been superimposed and re-imposed upon familiar patterns so deftly by Dewey and Dakin and their disciples.

But he did have the ability to transport his analytical mind to a lofty, stratospheric "out of this world" elevation from which he could look down upon mankind's puny progress and then deduct certain conclusions as to the future course of global events.

Lin Yutang and Spengler

Spengler conjured mighty historical trends in terms of thousand-year cycles. From where he sat on his astronomically-high philosophical perch, he thought he could see a time-pattern of Occidental-Oriental cultural and dynamic ascendancy. One civilization succeeds another inexorably and geographically. Such shifting eras of world dominance by races and nations move slowly around the globe according to foreordained patterns, he declared. And there's nothing you or I can do to check these glacial movements. They just happen, that's all.

From an unexpected quarter (the cultured Chinese repatriot, Dr. Lin Yutang) Spengler's theses have received signally important support in recent years. During his tremendous stint of translating the flowering and the effulgence of four hundred decades of Chinese literature, Dr. Lin has reproduced and translated an immense volume of Chinese literature-covering almost 4,000 years of oriental records.

These gargantuan studies, when looked at somewhat off-handedly, seem to produce conclusive proofs that history will repeat itself according to predetermined rhythms. In fact, a resume of Chinese political and cultural history, charted and graphed and related to Oswald Spengler's dolorous predictions as to the ultimate fate of our western civilization, turns out to be too coincidental for comfort.

If Spengler and Dr. Lin are right in their deductions, we are due to suffer a series of wars-of-extermination-during which entire nations, cultures, and civilizations will dis-

Such tragic cataclysms recur, if we are to believe the time-sensing German and Chinese interpreters of history, because the inarticulate "masses" periodically boil up a witches'-brew belief that they are receiving a "raw deal."

So they set out to murder their 'bosses"—and their benefactors indiscriminately. In so doing, they destroy themselves, their children, and their children's children. Eventually, a different race of people emerges from the debris and takes charge. "The King is dead! Long live the King!"

You Know Who Gets It In the Neck

Naturally, all revolutions, "purges" and Inquisitions destroy deplorably large segments of the talented, idea-generating and income-producing individuals who carry the "common people" of any politico-economy on their backs.

They also destroy untold capital wealth-which is irreplaceable. Capital (in the form of tools which lighten the labor burden and increase wealth) always elevates living standards, wherever it exists.

And so mob violence and those emotional sprees which start out to "common man" always help the impoverish the "little fellow." Incidentally, those same revolutions snuff out the lives of millions of the inarticulate "masses" themselves.

Temporarily, wars and revolutions may seem to better the lot of submerged folk who feel that they have been abused, neglected, or overlooked. To their opportunities for plunder is added the heady "jag" of inflation (which gives an illusion of prosperity, but is inevitably followed by distress and disaster).

The "masses" may pocket a God's plenty of free-flowing currency and stolen loot during wars. This extra pocket-money they get without involving themselves in commensurate long-term commitments (such as higher rent, more insurance, investments, contributions to charities, etc.) So it happens that the newly rich laborers enjoy a short-term spree of spending. This they like. They want it to go on. So they do foolish things to prolong the war, the looting, and the inflation.

Eventually, though, the average person takes it on the chin after every so-called economic revolution has spent its initial force. The happy. times inflation backfires. Unemploy. ment recurs. Sudden plenty turns into desperate insecurity. Before long, the "little fellow" gladly and thankfully settles back down into his appointed place in the scheme-of.

When the nation and the economic system within which he lives returns to a degree of normalcy, this gentleman discovers that he is just about where he started before the rat-race began. That is, if he's lucky. Chances are, he's much worse of than before. Look at the German and the Japs today!

The Law of Inequality

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Because all men aren't created equal (some men can run faster than others, some are taller and stronger, a few are "smart," and one woman may be prettier or more sexually appealing than her competitors) it has been demonstrated by the Cyclists that in Patagonia or in New York, approximately 5% of the families will be rolling in wealth, 18% will be "well fixed," 26% will be reasonably comfortable, and the remainder will be in dire straits or liv. ing from hand to mouth.

Curves, charts, and graphs pre-sented by disciples of the Rhythm Religion show that this distribution of current and accumulated wealth comprises almost a fixed constantwhether or not the nation or the civilization in question may be at the top or the bottom of a long-term cycle. The presence of this "constant" in so many historical curves of national income distribution should fix the clocks of the would-be economic planners and "do-gooders" for all time.

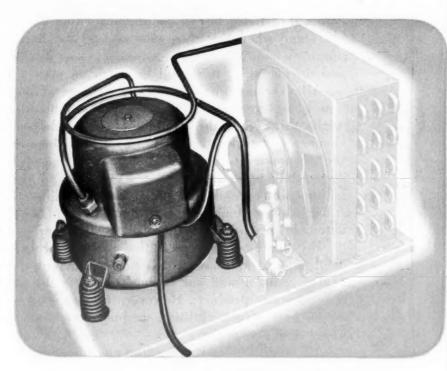
Income distribution, and wealth possession, apparently is a manifestation of one natural law which no reformer can alter. This Law is: Men aren't created equal.

Special abilities and talents are scattered by God's lavish hand amongst the people even more irregularly than are unearned legacies. (As discerning pedagogues have noted, brilliance upon the part of the top members of any schoolroom class is almost equally counterbalanced with ineffable stupidity upon the part of the bottommost group of so-called scholars.)

· (To Be Continued)

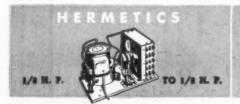
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Editor's Note: Readers will recall an earlier article by Mr. Norton which discussed the importance of the interview in screening applicants for sales positions. Like the previous article, this one is reprinted from Dealer Doings, a publication of the Wisconsin Power & Light Co.

By M. R. Norton

In attacking the problem of compensation for salesmen, let us consider first how the percentage of gross sales which the dealer sets aside for such payments should be meted out to those responsible for Should they be paid a straight salary, a straight commission, or a combination of both?

It seems obvious that the method of payment will be determined by what the dealer wants to accomplish. If he wants a lot of control over the salesman and his activities, a straight salary will accomplish the purpose best. Then the dealer can tell him exactly when to come to work, who to call on, and almost how to part

The salesman's wife may like the security of "guaranteed" pay checks, and he is not apt to cause much trouble. However, he probably isn't going to produce as well as he should and the merchant takes all the risk.

On the other hand, it has been repeatedly demonstrated that, while high sales result from paying a straight commission, one of the difficulties is a rapid turnover of men. Furthermore, a dealer has less control of them because each salesman feels that he is on his own, and as long as he is producing, it is his own business if he takes a day off to go fishing or "raise hell" generally.

The dealer is not so much out of pocket if a salesman on straight commission doesn't produce, but he is much more apt to have his salesmen get him in trouble or leave for greener pastures.

Surveys show that the majority of dealers have worked out some kind of combination plan whereby they pay a base salary, which is large enough to maintain reasonable control and give a salesman a steady income with its sense of security, plus a bonus or commission large enough to keep him "steaming"

J. D. Howard, general sales manager of Wisconsin Power & Light Co., who has made a study of sales compensation, has reached the conclusion that 70% salary and 30% commission or bonus is about right. But the salary must not be the same for all salesmen. It should be geared to their production and general value

Some dealers toss in a bonus for extra effort or special campaigns. Even if a dealer has only one salesman, it is effective to make a deal to take him fishing or to a ball game as a reward for doing an extra special job for a given period. A little fun now and then keeps a salesman on

The commissions or bonuses should be higher on long-profit items. Both the dealer and the salesman gain on that sort of an arrangement. bonus or commission can be lower on short-margin appliances for which people are standing in line. This plan may seem elementary, but it is surprising how seldom it is done.

A sliding scale of commissions is a good stimulator. When a salesman gets into each successive volume bracket, the rate of commission

might be increased. It works! Volumes have been written on the details of compensation plans, but a merchant won't miss very far if he is guided by the following rules:

1. Make the plan fair to the salesman as well as the dealer.

2. Make the plan simple so that it doesn't add too much bookkeeping.

3. Provide enough base pay to develop stability in the salesman and to maintain control of his activities. A 70% salary and 30% commission is suggested with the amount of salary adjusted to each salesman's production and general value.

4. Pay enough commission and bonus so that the "boys" will get in and pitch.

5. Provide an extra "spiff" or commission on the long-profit items.

6. Set aside enough money for prizes, trips, or fun even if only one salesman is employed. Salesmen need that spark. It makes the difference between order takers and sales-

Wisconsin Contractors To Meet Nov. 29-30

MILWAUKEE - A state convention open to all refrigeration contractors in Wisconsin will be held Nov. 29 and 30 in the Schroeder hotel here by the Refrigeration Contractors Association of Wisconsin, president E. F. Anderson announced.

The program for Nov. 29 will include registration at 9 a.m., the opening meeting at 10 a.m., a luncheon at noon, and the main meeting in the afternoon. Then will follow a cocktail hour, a banquet and floor show, and a dance.

Prominent speakers from the refrigeration industry, including officers of the National Association of Refrigeration Contractors, are scheduled for the afternoon session. Clyde M. Paust, a Milwaukee attorney, will speak at the banquet, to which women and servicemen employes will be invited.

On Nov. 30, committee meetings will be held starting at 10 a.m. and the association's regular annual meeting will get under way at 2 p.m.

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Refrigeration Machine, Remote Equipment Divs. At G-E Name 6 to Posts

BLOOMFIELD, N. J. - Six new appointments in the commercial organization of General Electric's refrigeration machine and remote equipment divisions have been announced at the Air Conditioning Department headquarters in Bloomfield by W. F. R. Karsten, sales manager of the divisions.

W. G. Cox has been appointed assistant to the sales manager; J. L. Roth has been placed in charge of commercial activities at the Ft. Wayne, Ind. plant; and W. F. Benoit has been named sales manager, manufacturer sales.

R. M. Bukaty, H. R. Walker, and Milton Kalish have been appointed product specialists.

Mr. Cox, a graduate of California Institute of Technology, has been with G-E since 1936, and in 1940 came to the Air Conditioning Dept. Mr. Roth joined G-E in 1930 as

In Commercial Division Appointments



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Accessories • "Detroit" Expansion Valves and Retrigera-

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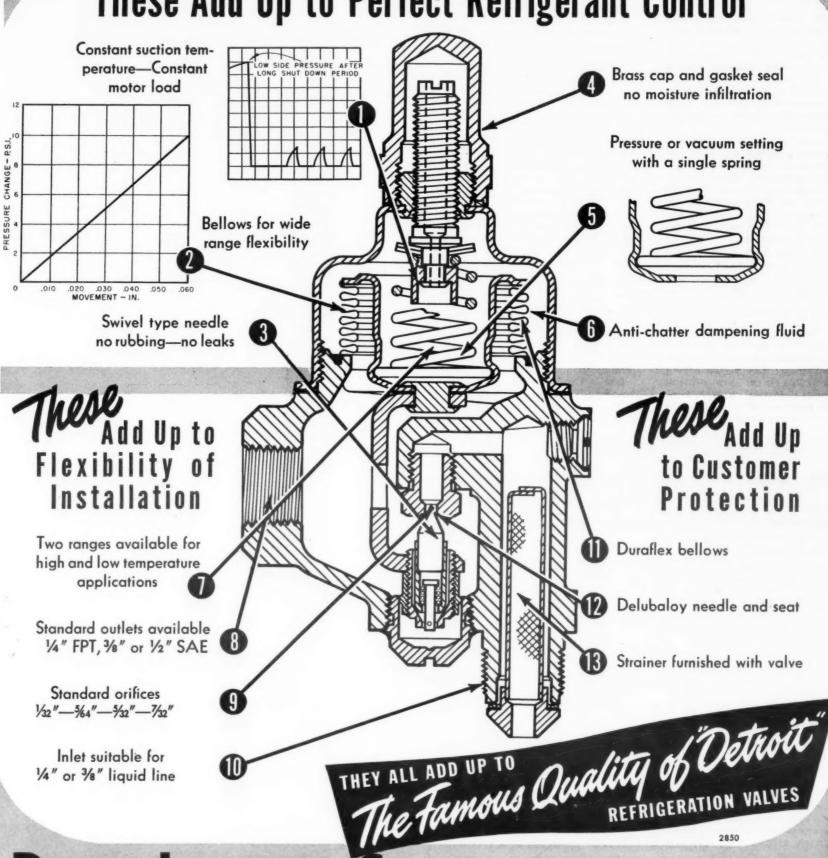
Heading Commercial activi- Assistant to Sales Manager. ties at Ft. Wayne.

commercial service manager and product manager for a New York distributor. After Army service in 1943, he came to the Bloomfield office as a field engineer, and later district representative on cooling equipment

for the Chicago metropolitàn area. Joining G-E early in 1946, Mr. Benoit began as a sales representative in New York, and later became eastern manager of sales to manufacturers for the RM and RE divisions.

Lets Analyze Quality "Detroit" No. 672
Automatic Expansion Valve
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These Add Up to Perfect Refrigerant Control



Manufacturers Must Balance Allocations To Gain Efficiency In Distribution

Study Of Consumer Attitudes and Competition's Strength Is Key to Survival, Declares Nance

BOSTON-James J. Nance, president of Hotpoint, Inc., told the Boston Conference on Distribution here that better market controls constitute the only possible solution to the five new conditions for appliance merchandising now confronting manufac-

He said these new conditions are increased production facilities, higher retail prices, a changing market structure, an increased potential from within and without the industry, and the task of training sales personnel.

Solution Means Survival

"By solution I mean survival," Mr. Nance explained. "I mean survival for the appliance industry and more specifically for the individual manufacturers who wish to be a part of it.

"It must be bluntly admitted that we have not solved the problem of reducing marketing cost in the same way we have production cost. Unfortunately, conditions since V-J Day have not been conducive to the nurturing of new efficiencies and market

If management is to successfully meet the new marketing conditions, Mr. Nance declared, it must get affirmative answers embodied in each of the following categories:

Not All to One Area

"1. We must analyze and determine the trends for product allocations to distributors. At the present moment this is necessary to be sure that relatively scarce items do not go into one area, or into one or a few distributors' warehouses at the expense of a well-balanced national marketing organization

"Product allocation has been a big headache since V-J Day, but the situation will be reversed the minute appliances back up on dealers' shelves. Then distribution efficiency can be gained only by sales supports that force the appliances into the areas where the market potential lies.

"2. We must have checks on the individual efficiency of dealers and distributors as our next step toward reducing costs.

Sizing Up Competition

"3. We must determine the strength of competitive distributing organizations and, I might mention here, that in the seller's market this is a very difficult task, but it is vital to each retail dealer that we tell him where he can expect his toughest competi-

"4. We must know the strength

of competitive lines. Our approach must be through the dealers who work directly with the public to know that our products embody the features that meet the consumer demands: that information influences our product design.

Responsive to Consumer

"5. We must appraise the attitudes of consumers towards our products. This information is vital when it can be made to show where we are spending money on products that might be saved and likewise where we are making a saving that we can ill afford.

"6. We must evaluate the unsatisfied needs of our customers. The consumer has many abstract wants that do not reflect in his purchases. We must plan two or three years ahead of the crystallizing want of the consumer.

"7. We must check consumer buying habits not only for appliances but for all commodities. It is only by thorough studies of the consumers' habits that we can project beyond the present.

Avoidance of Over-Selling

"8. We must measure the extent of markets for new products. Probably the biggest headaches that retailers have had, have come from being over-sold on a product that does not have a deep market.

"I can again mention the recent 'jumping in' of 100 manufacturers for home freezers (referred to earlier in Mr. Nance's speech). It stands to reason that 90% of these are 'quickies' and they did not have the advantage of good market research, or millions of dollars that is being wasted would have been saved.

"We must test new products by actual consumer sales. It is extremely important to the appliance manufacturer who can invest from \$100,000 up to several million dollars that he has desired features and designs in all his products."

New Conditions Outlined

Earlier in his talk, Mr. Nance had gone into a detailed discussion of the five new conditions for appliance merchandising. He outlined these conditions as follows:

"1. We have an industry with production facilities expanded more than 200% over 1941, our last active selling year.

"2. We have greatly increased production costs resulting in prices far higher than our customers have been accustomed to paying.

"3. We have a marketing structure with the experienced units approaching obsolescence on one hand and on the other hand, retailers untried at competitive selling of electrical appliances and sometimes new in this business.

"4. We have a vastly expanded production potential in the industry that defies immediate measuring because of invasion of this market by former makers of capital goods, food products, etc.

"5. We have an army in the neighborhood of 250,000 salesmen who must be trained on the job to sell Mr. and Mrs. America." Examining the first condition, Mr.

Nance said industry estimates of the source of the 200% increase in production facilities are that approximately one-half of the increase will be for established brands, with the balance coming from newcomers to the industry.

Wives Doing Own Work

In this connection, he pointed out that there are fewer house servants

"Meanwhile," he noted, "housewives have learned to do their own work. A good many of them like it and have no desire to go back to servants. So, today we see a vast new market in equipment to eliminate labor from housework.

"The condition that I listed as No.

higher than our customers have been used to paying, is one that will not be put down," Mr. Nance continued. "During the early part of this year we read and heard much about 'buyers' strikes,' pricing ourselves out of the market, and other expressions indicating a general concern over the increased cost for the equipment we manufacture.

Justifying New Prices

"In industry we know that prices result from specific basic costs. There is obviously a leveling off of prices on a much higher plateau than in the days preceding the war. This places the obligation upon each industry to educate its customers in the justice of the new prices as related to income and to costs of other commodities.

"I noticed recently a study where Ford prices from 1932 to 1947 were taken as a barometer for price comparison in the automobile field. Figures showed that in March of 1932 the deluxe model was sold for \$550; the price as of Aug. 25, 1947, was \$1,295. That is an increase of

"According to National Electrical Manufacturers Association records, the average electric range sold in 1932 for \$150 and in August of 1947 the price was \$205, an increase of 36.7%. The average electric refrigerator in 1932 sold for \$195, while the August, 1947, price was \$228, an increase of 16.9%

"When it is pointed out that both ranges and refrigerators have somewhat greater capacities on the average than they had 15 years ago, it can be seen that this industry has made fundamental and outstanding gains in manufacturing techniques.

"We can see that the price in. creases are justified, but that does not obviate the necessity for educat. ing the customer to paying consider. ably more than she has formerly for what appears to be the same product

"While we are doing this educating job, there may be a broad decline in real income which will lessen the purchasing power of consumers. Management's obligation, therefore, in. cludes improvements that will permit low prices even while educating consumers to pay the larger amounts."

Taking up point three, the chang. ing and sometimes obsolete pattern of the industry's retail marketing structure, Mr. Nance observed that while this mixed picture is today confusing, there are signs that appli ance merchandising is reaching ma.

"At one time the electrical appliance marketing function was sponsored mainly by electric utility companies," he said. "It was only when appliances had gained public acceptance, spurred by the rise of the electric refrigerator in the twenties, that the independent dealer came into the field.

Larger Dealers Attracted

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'Slowly the department stores and large furniture companies saw the value of appliances as traffic builders, as well as for profits. Because large stores were accustomed to long discounts on products for which they did the entire marketing job, they were slow to accept the terms offered by manufacturers who had established national consumer demand through advertising.

"Now, in postwar, department stores have definitely swung to nationally advertised brands of appli-(Concluded on next page)

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(Concluded from preceding page)
ances. Today they are a powerful
factor in appliance merchandising;
but, these stores were built on soft
goods lines.

"A merchandising event that offered shirts brought thousands of shoppers who carried away the merchandise. A sale on major appliances brought a much smaller crowd and it was frequently overlooked that the dollar volume was greater.

"Before the war, there were approximately 50,000 outlets for major electrical appliances. Now the best industry estimates are that there are more than 100,000 stores showing this equipment.

"That means that at least one-half of the industry outlets do not have experience in operating a store to sell its products. Each manufacturer has a certain per cent of these dealers who will not be able to survive the economic pinch that will come with the return of competition."

Established producers of appliances have expanded their facilities because each felt the hot breath of competition forcing him from his industry position, Mr. Nance explained in discussing point four, the problems posed by the industry's double-headed expansion.

"Meanwhile," he remarked, "he was not unaware of the broad invasion of his market by producers from other industries.

"Plant facilities and tools to produce major electrical appliances represent a major investment. In examining the new competition fac-

Market Grows as More Women Do Own Work



One of the products aimed at "the vast new market in equipment to eliminate labor from housework" described by Mr. Nance in the accompanying article is this dishwasher that rinses and dries 58 dishes and silverware at the "touch of a button." The dishwasher pictured was part of a Hotpoint display during the American Home Economics Association meeting this summer.

ing the industry from invaders, we see that the greatest number is going into lines requiring the least production investment.

"For example, refrigerators requiring many millions in plant investment are perhaps least of all affected. On the other hand, its refrigeration companion-piece, the home freezer, has attracted some 100 manufacturers

"It is interesting to observe that a product that has an established and almost universal demand, such as the refrigerator, attracted almost no new producers, while a product such as the home freezer that has practically no customer acceptance attracted 100 manufacturers."

On the subject of sales training, the Hotpoint executive said the best industry information indicates that well over 90% of the new appliance retailing force of the nation will be gaining its first selling experience.

"Dating from the mid-twenties, the rapidly expanding appliance business attracted highly skilled sales spe-

cialists. They got their feet wet in the business by developing strong sales programs around product features as those features were added to the appliances.

"Field selling organizations were trained to dramatize the differences between old ice boxes and mechanical refrigerators; between solid fuel cooking and electricity. These factory organizations trained distributors, and finally thousands of retail salesmen were trained.

"The industry received a setback in 1930 when the depression struck and only the best salesmen were retained. Again a slow building process started, which was again interrupted in 1940 with the first rumblings of the national defense act.

"So, today we have two types of salesmen: the remnants of those pioneers who are men of middle-age and who have not sold competitively since before the war, and a vast army of new young men that make up the bulk of the 250,000 that must be trained."

Air Conditioned Candy Vendor Tops New Line Of U.S. Vending Corp.

CHICAGO — Plans for production of its complete line of refrigerated vending equipment, including a new air conditioned automatic candy vendor, were announced by United States Vending Corp. at a recent meeting of distributors here.

The new vendor, which will offer seven candy selections, was introduced at the meeting. Production is scheduled to start before the end of the year.

of the year.

Henry T. Roberts, vice president and director of sales for the company, described the meeting as "the largest in the history of the coin machine industry in dollar volume of orders received."

"Result of the meeting has been the establishment of the country's first complete national vending service, with standardized 'Pik-Ups' air conditioned vending equipment soon to be located in every state in the Union," he said.

It was pointed out that the 10-item vendor developed originally was known as an automatic store and vends such items as carbonated beverages, milk, beer, sandwiches, and fresh fruit. The more recently announced frozen food vendor, developed and patented by Clarence Birdseye, is claimed to be the only low-temperature vending mechanism

that will not become inoperative at sub-zero temperatures.

Allen G. Messick, president of the firm, presided over the distributor meeting attended by more than 115 persons. Speakers included Senator Homer E. Capehart, of Indiana, and Carlyle Emery, vice president of Ruthrauff & Ryan, Inc., U. S. Vending's newly-appointed advertising agency.

Refrigerators Down, Other Appliances Up In Chattanooga

CHATTANOOGA, Tenn. — Large sales gains on household electric ranges, water heaters, ironers, and washers, counterbalanced by a sharp drop in household refrigerator sales marked the September sales picture reported by local major appliance dealers to the Electric Power Board.

On the commercial side, sales gains were reported in commercial refrigerators, freezing cabinets, and ice makers and water coolers. Beverage cooler sales showed a considerable decline from August figures.

September unit sales and dollar volume, as reported by the Power Board, are as follows:

Refrigerators

239 \$64,381.18

Home freezers	35	10,103.35
Ranges	368	92,645.12
Water heaters	292	34,970.91
Ironers	51	6,836.52
Vacuum cleaners	186	15,430.75
Clothes washers	477	83,403.83
Clothes driers	8	1,776.50
Dish washers and		
sink combinations	5	1,599.99
Air conditioning units	17	24,352.88
Commercial		
refrigerators	15	14,195.56
Freezing cabinets	9	5,369.33
Milk coolers	2	990.00
Beverage coolers	50	16,072.28
Ice makers,		
water coolers	5	857.00

Western Auto Supply In Executive Shifts

KANSAS CITY, Mo. — Western Auto Supply Co. has announced promotions of A. B. Flemington, formerly vice president in charge of buying, and C. V. Knutson, formerly assistant secretary and director of sales. Mr. Flemington was advanced to the position of vice president in charge of merchandising, and Mr. Knutson was named director of buying.

The shift was part of a far-reaching realignment brought about by the resignation of Bert C. Gamble as board chairman, with elevation of Lester Hutchings to that position, and of Paul E. Connor to the presidency of the company.

Western Auto's network of company-owned stores and independently owned Western Auto Associate Store wholesale accounts now extends over 38 states east of the Rockies, a total of 256 company-owned retail units and 1,837 associate dealers.

Airplanes To Appliances

CHEYENNE, Wyo.—S. Occhipinti has resigned as foreman in United Air Lines store department here, a post he had held for 12 years, to open his own appliance firm under the name of the Electrical Center.





CAMERA REPORT

Strunk Takes Gavel

Unique Freezer Demonstration Proves From Predecessor Outboard Motor Maker's Sales Point



E. Strunk (left), recently elected president of the International Electrical Leagues, receives the gavel from W. G. Hill (right), retiring president. Mr. Strunk was formerly vice president of the organization.



At the Minneapolis laboratories of Champion Motors Co., manufacturer of outboard motors, a home freezer was recently called into service to demonstrate the starting ability of its product. The motor was placed in the freezer, where it was held at -18° F. for four days. Upon removal, it is said, the demonstrator started the engine in one minute and 15 seconds. Witnesses were Alfred Colle, Alfred Colle Co., and F. G. Cramer.

20,000 At Carrier's New Plant Open House



When Carrier Corp. took over the huge WAA plant in Syracuse, they celebrated with a community open house, which was attended by 20,000 persons. The new plant will give Carrier 600,000 additional square feet,

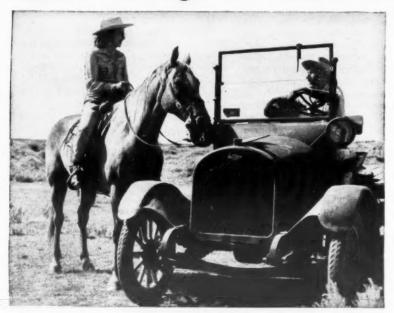
'Rema' Gets Invitation to All-Industry Show



"Rema," the penguin at the Cleveland Zoo, greets F. J. Hood, committee chairman for the Fifth All-Industry Refrigeration & Air Conditioning Exposition from his refrigerated quarters when he gets his special invitation to the Show in Cleveland, Jan. 26 to 29.

OLDEST CHEVROLET TRUCK FOUND!

1918 Model — One of First 384 Built — Lasts Through the Years to Win National Contest



America's oldest Chevrolet truck-with an unmatched record of faithful service for more than a quarter-century-demonstrates the typical rugged, reliable performance of Chevrolet trucks through the years. The venerable veteran, built during the first year of Chevrolet truck history, is a "living" tribute to product quality, offering assurance to America's truck users of Chevrolet long life and dependability.

Two dependable forms of transportation are compared here truck" hunt, chats with Montana Cowgirl Morle Spears.

Beryl Davis Appears at Bamberger's Fair

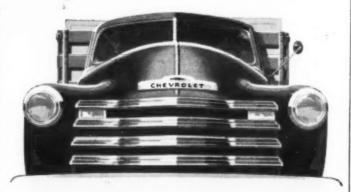
Miss Beryl Davis, popular recording artist, was in attendance at the RCA display at Bamberger's Annual Housewares Fair. held recently at Newark, N. J. With Miss Davis are David Davis, manager of the Macy Chain of Radio and Records; Paul Krich, treasurer, Krich-Radisco, Inc.; and Alexander Lewi, executive president, L. berger & Co.



Choose Advance-Design CHEVROLET TRUCKS for **Transportation Unlimited!**

Still the leader for lasting value, only Chevrolet trucks have all these Advance-Design features: the cab that "breathes"; Flexi-Mounted cab, cushioned on rubber, with 12 inches more foot room-eight inches more seating space; 22% greater visibility; fully adjustable seats; stronger frames; increased load space in panels and pickups-plus countless other features in these trucks powered by Chevrolet's famous valve-inhead engines-the world's most economical engines for their size. . . . There's a Chevrolet truck to meet your hauling or delivery requirements-107 models and eight wheelbases. See these Advance-Design trucks at your Chevrolet dealer's.







CHEVROLET MOTOR DIVISION, General Motors Corporation **DETROIT 2, MICHIGAN**

WANTED SALES AGENT

Manufacturer of refrigeration, air conditioning, heating and ventilating equipment is appointing individuals to handle these lines in territories that embrace one or more states. We are delivering our 1948 models now. Air conditioning equipment available in sizes 34 ton to 50 tons.

Director of Sales

Chicago HEAT-MASTER Company

506 S. Wabash Ave.

Chicago 5, Illinois

CONDENSING UNITS IN STOCK 1/3-1/2-3/4 H.P.

> **IMMEDIATE** DELIVERY

REFRIGERATION AIR CONDITIONING HEATING

PARTS AND SUPPLIES

SERVICE PARTS COMPANY 2511 Lake St., Melrose Park, Illinois

Meat Sales Soar When King's Sooper Market Installs 33-ft. Continuous Self-Serve Refrigerated Display Case

\$4,000 Weekly Gross Is Reached by Suburban Meat Department

DENVER-The largest self-service meat display refrigerator ever installed in Colorado is a salesbuilding feature of the new King's "Sooper," pocket-sized supermarket opened by Lloyd King in Arvada, a populous northern suburb of Denver.

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Mr. King, who before the war owned and operated the Save A Nickel chain of supermarkets in Denver and gave them up for military service, has stressed "mass display" and large capacity all the way in his self service meat department. Mindful of the fact that most self service refrigerators are too small for the job assigned them, he put in a lot of time working with refrigeration manufacturers for a case big enough to handle the heavy sales

CASE HAS NO DIVISIONS

"We have a trade composed of suburbanites and many small-acre farmers in Arvada," he pointed out, "and we have to be able to put out lots of meat to please them, and to take care of large purchases."

The result was the 33-ft. "continuous" self service meat case shown herewith, which was provided by the Denver Hill distributor. By means of a single continuous case, without divisions or partitions of any kind, King's Sooper can show 33 solid feet of prepackaged meat, all laid out 80 that the customer who has a lot of meat varieties in mind can see them all in a sweeping glance. More customers are buying more meat at a single visit as a result.

Providing low temperature over its length with a single compressor, the case has also 12 refrigerated compartments below in which stocks of packaged meats to match those above are kept. During rush periods, the case can be swiftly restocked from these cabinets, large enough to hold a full day's requirements for every variety of meat.

The case is split into sections for smoked meats, luncheon meats, meat specialties, cheese, and more than 18 ft. devoted entirely to prepackaged fresh meats. A customer at one end can easily see meats at the other end, more than 30 ft. away; a factor which Mr. King has heavily

LUNCH MEAT VOLUME QUADRUPLES

Results have been on the amazing side, according to the Colorado grocer. Sales jumped immediately to more than \$4,000 per week, and have been increasing steadily despite high meat prices and shortages in some varieties. Luncheon meats and smoked meats are selling at a rate four times what had been expected, while the popularity of fresh cut meats has literally "floored" the management.

To keep up with this demand, a four-man team of butchers is organized into a "production circle" housed in a separated enclosure at the rear of the meat case. Equipped with tenderized, electric saw, a walkin refrigerator, heat sealing equipment, overhead rolls of cellophane, and label cabinet, the meat processing room is busy cutting and prepackaging 8 hours daily. Union butchers quit at 6 o'clock each evening, after cutting and packaging enough meats to last until store closing hours at 9 o'clock.

In order to meet exceptionally heavy demand, policy is to cut cheese 5 days ahead, luncheon meats 2 days

ahead, and fresh meats 1 day ahead; the reserve is stored in the walk-in refrigerator which is in the same

SPECIAL CELLOPHANE USED

A specially treated variety of cellophane (MSAT 80) is used for all packaging, heat-sealed shut, and with the label pressed on with the same heat-sealer. Mr. King had some difficulty with darkening, unattractive meat appearance until the proper packaging materials were found. Also, the store experimented with cartons, boxes, etc., before settling on plain cardboard backing, cut to the shape of the meat, as the most popular way of packaging. Mindful of the high cost of meat today, King's Sooper doesn't charge the customer a cent for packaging, figuring that the weight of the packaging materials will take care

MARKET ABSORBS COST

Costs average 11/2 cents for small items, and up to 3 cents for roasts, hams, etc. When the store sells a volume like 1,350 pounds of picnic ham on a single Saturday, it can easily afford to absorb the package cost, Mr. King grinned.

The huge case is stocked constantly through the day, using a white enameled wooden cart which has sections corresponding to the type of meat at each point in the case. This saves the time of busy butchers, who incidentally, have little or no contact with customers, spending all of their working hours cutting and packaging.

In addition to the 33-ft. open meat case, King's Sooper has a similarly large frozen foods case.

Customers Rarely See Butchers Behind the Scene



Customers selecting their meat from the 33-ft. case at King's Sooper Market in Arvada, Colo.

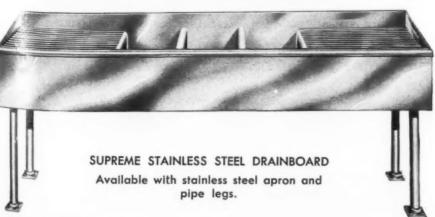


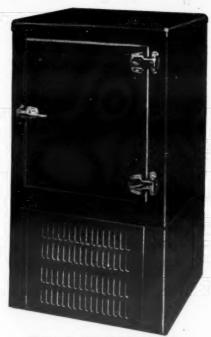
Four butchers work eight hours a day to keep cases supplied with pre-packaged meats.

ADDITIONAL MODELS IN THE POPULAR LA CROSSE



THE LA CROSSE ELECTRIC DIRECT DRAW Quality equipment used throughout guarantees the best in serviceability.





ESKIMO ICE CUBE MAKER Available with quick release style trays.

Further proof of leadership in the field is shown by this selection of equipment from the complete line of the La Crosse Cooler Co. A complete understanding of the problems of commercial refrigeration plus the research and engineering ability of our staff assures top performance of this test proven equipment. For the best in design-performance and cost-IT'S LA CROSSE.

PARAMOUNT DIRECT DRAW TAP BOX Available in various sizes





The finest in storage equipment — serviceable, accessible and durable. Capacity for three 1/2 barrels below—16 cases of bottles above.



For further information about these and many other models— Write to



2809 LOSEY BLVD. SO.

LA CROSSE, WISCONSIN

PRODUCTION MANUFACTURERS

ELECTRICAL WIRING HARNESSES AND DEVICES FOR REFRIGERATORS ELECTRIC RANGES WASH MACHINES APPLIANCES AUTOMOBILES RADIOS

Insulated wire cut and stripped to your specifications, cord sets, heater cords and extension cords. Send us your print or sample.

IMMEDIATE DELIVERY

RIVERSIDE MANUFACTURING PHONE 288-2934-3175 200 S. RIVER ST., YPSILANTI, MICHIGAN



SPECIAL

4-pound Freon-12-including cylinder with heavy duty wheel valve price, \$7.50 each F.O.B., immediate delivery. Also all sizes compressors 1/4 H.P. to 2 H.P.

CENTRAL SERVICE SUPPLY

647 S. Warren Street, Syracuse, N. Y. 203-211 Jefferson Ave., Scranton, Pa.

Phone 5-4000 & 3-0313 Phone 3-4000

In Advertising Post



FRANK X. HAMILTON

He was recently appointed supervisor of household refrigeration advertising for the Westinghouse Electric Appliance Division.

Woman's Apparel Shop Decides To Add Major Appliance Lines

OKLAHOMA CITY, Okla.-After 10 years' operation in this city as a women's and girls' apparel shop, Kaybee Credit Clothing is adding lines of major and traffic appliances, reports N. Weiss, manager.

To accommodate the new departments the company is adding the store room adjoining on the south, formerly occupied by the gift shop operated by McEntee Jewelry Co.

Revised Robinson-Patman Act Urged To Give More Protection to Small Operators

products.

his goods.

prices.

tirely localized."

NEW YORK CITY-Appointment of a Congressional committee to investigate the Robinson-Patman Act, with the view to revising and strengthening it, was urged by the National Association of Wholesalers in a declaration of policy made public at its two-day convention here.

Asserting that the broad benefits envisaged in the act have not been realized, the association declared that the legislation, which was enacted to eliminate unfair advantages in price or terms, was so phrased and worded as to "confound and render ineffective" its aims.

In its declaration of policy, the association also urged the federal government to establish a division of wholesalers in the Department of Commerce, promote stabilization of business by enforcing fairly the antitrust laws, foster free movement of goods by encouraging uniform trucking and transportation laws in the states and strictly enforce open competition among all persons selling to the government.

Disclosing the findings of a roundtable discussion on whether wholesaling could cope with economic conditions without restrictive legislation, Sigfried F. Hartman, counsel to the association, said it was the unanimous opinion of the participants that the independent wholesaler and retailer was in jeopardy of being forced out by large competing units unless they were protected by state and federal statutes.

Consensus of wholesalers taking part in group discussions, Hartman said, was that the fair trade laws should be continued for what they are worth. He said they have been ineffective in part because some manufacturers have been loath to fix

KNOXVILLE, Tenn. - Increased

Knoxville Dealers Up

Sales of Refrigerators

sales of all major household appliances during September were noted in a report issued recently by the Knoxville Utility Board.

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As to the Robinson-Patman Act.

the wholesalers expressed belief that

strong revision is necessary to place

them in the same relative positions

as large retailers in obtaining

equitable prices from manufacturers,

Producers who sold wholesalers at

the same price as large retailers,

Hartman said, were discriminating

against the smaller retailer who was

dependent upon the wholesaler for

Joseph Kolodny, who was re-

elected president of the association,

declared that business must conscientiously analyze its own opera-

tions to determine the extent to

which it can continue on the basis

of current prices or lower these

"There is urgent need for imme-

diate re-evaluation and reappraisal

of our entire cost and profit system,"

he said. "We continue to operate

under a cost and profit concept which

is merely a carryover from the

pioneering era of the United States when manufacturing was almost en-

Though unit sales figures for September, with 45 dealers reporting, were naturally higher than the August figures, with 33 dealers reporting, they have also proved to be higher than the July statistics covering 52 dealers.

Where 52 dealers sold 237 refrigerators in July, 45 dealers sold 250 refrigerators in September, the report revealed. Home freezer sales for the two months were 16 and 19 respectively. Electric ranges, on the other hand, dropped from 308 in July to 226 in September. However, August range sales by 33 dealers were only 150 units.

Sales of residential units for September, with their dollar value, are as follows:

	Units	Value
ome freezers	19	\$ 5,961
efrigerators	250	66,023
anges	226	55,272
ater heaters	131	16,044
ther major appliances	98	11,455
aste disposal units	3	373
ashing machines	350	55,488
oners	40	3,813
ace heaters	182	4,063
nall appliances	630	11,979
ghting equipment	75	1,212
imp bulbs	252	697
ırm pumps	2	400
her equipment	345	13,943
otal	2,603	\$246,723

Denver Appliance Store Allows Vets 5%

DENVER-Colorado Appliance Co. here, retailer of home appliances, has created considerable attention through the fact that the store gives a 5% discount to veterans who purchase appliances while exhibiting a card issued by the Veteran's Administration here.

Under the plan, Colorado Appliance Co. encourages the VA to issue a card identifying the customer as a genuine, honorably-discharged veteran. The downtown agency issues the cards, which Colorado Appliance Co. honors by deducting 5% from the cost of anything sold in the store.

Dealer Names Sanders Manager

OGDENSBURG, N. Y. - Richard W. Sanders has been appointed manager of the Empsall-Clark Co., appliance dealer here, according to Edwin S. Clark, president of the company. For the past 14 years, Mr. Sanders has been merchandise manager for Sheridan's, Inc., Quincy, Mass.

Available for Immediate Delivery



PERLICK DIRECT DRAW DISPENSERS

Completely Equipped-Ready to Install

The last word in beer dispensing equipment is at your call again, for immediate delivery. Proper tasting beer, of uniform temperature, with the right collar is assured with Perlick Direct Draw. Investigate now!

WITH THE EXCLUSIVE AIR COOLED FAUCET STANDARDS

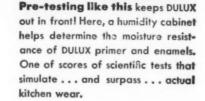
Only Perlick manufactures the Air Cooled Faucet Standard that maintains uniform temperature—eliminates the "spit" of oldfashioned systems. A patented feature!





IT'S GOOD BUSINESS to emphasize quality with a quality finish! The DULUX Seal does just that. Point it out. Even hard-to-please prospects respect the name DULUX. They'll know they're seeing a finish that will give them years of service in color retention, mar resistance, and outstanding good looks. You can tell them, too, that DULUX is rigidly pre-tested!

If your manufacturer supplies you DULUXfinished ware without the seal, ask him to include it hereafter. It not only helps boost today's sales, but "brings them back for more"! E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington 98, Delaware.





BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Control Tags, Bi-Monthly Inventory Simplify Cory Corp. Introduces Stock and Sales Records at Lansburgh's

WASHINGTON, D. C .- A system of inventory control and warehouse receipt has materially increased the efficiency of the Lansburgh Home Appliance Store, and resulted in better customer service.

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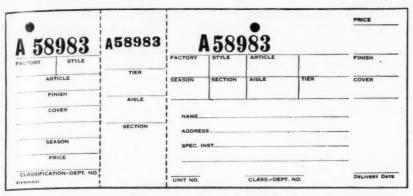
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373

Lansburgh's on Sept. 16 celebrated the first anniversary of the opening of their branch Home Appliance Store on Washington's well-traveled Seventh Street. The new store stocks exclusively gas and electrical applithird ticket is delivered to the customer at the time of sale, and is his claim check to pick up or claim from the delivery truck such merchandise.

A simplified arrangement system in the warehouse also increases the efficiency of operations and speeds up delivery. The warehouse floor is painted off into cross-numbered aisles, with numbers being assigned to aisles running in one direction and letters to those vertical aisles. This

Three-Part Perforated Card Has Matching Numbers



When an appliance is sold at Lansburgh Appliance Store in Washington, D. C., one portion of the ticket, shown above, remains with the article until it is delivered or picked up, the second part remains in the warehouse as long as the appliance is on hand, and the third is for the customer.

ances such as refrigerators, air conditioning units, washing machines, cooking ranges, and hot water heaters. Such items have always caused inventory headaches to the store, and their warehousing causes considerable customer inconvenience and

J. R. Brooks, buyer for the Home Appliance store, utilizing some of the experience which he had gained while in the Supply Corps of the U. S. Navy, came up with a system which has already been copied.

On inventory control, the system is based on the theory that "The only good way to keep an accurate stock count is to count your stock." All major stock at the Home appliance Store is accurately counted twice a month and the count checked against recorded inventory.

Between counts, and as a running inventory, each sales receipt passes over an inventory control clerk's desk where a permanent record is made. Similarly, all receipts also

pass immediately over the same desk. "We have a permanent and up-todate record," Mr. Brooks said. "It is simple and very efficient, and lets nothing slip by. We put down all the facts about receipts and sales at the time they are made."

The warehousing receipt system is equally simple and equally efficient. A three-part card is used, with matching numbers. One part always remains with the merchandise until it is picked up or delivered to the customer. The second part is retained in the warehouse as long as the appliance is on hand, and the tickets in the warehouse files make an efficient inventory control. The forms squares whose location is identified by a letter and a number, as "A-1."

At the time merchandise is delivered to the warehouse it is placed in one such square, and the location marked on the warehouse receipt card. A customer, claiming a refrigerator, for example, would present a warehouse receipt showing she had purchased an item stored in section B-5. Any person in the warehouse would be able to locate immediately the purchased item.

Mr. Brooks estimates that his system-which he claims is simple, and "should be a standard practice but frequently is not"-saves up to 25% on customer waiting time.

G-E Dealers To Feature Iron-for-Iron Warranty

BRIDGEPORT, Conn.-Under the terms of a new policy now in effect, General Electric's dealers are the first in the history of the electrical appliance industry to offer their customers an iron-for-iron exchange for those designated irons which fail under the terms of the warranty, declares M. B. Ross, manager of the

company's heating device division. The new exchange policy makes it possible for customers to return specified General Electric irons which have failed to perform according to guarantee and to obtain new ones from their dealers. The dealer simply ships the faulty iron to the nearest G-E appliance service center and receives a new iron.

BAYERS MAKES CARBONATION HISTORY! AUTOMATIC - MOTORLESS-VENTLESS FULLY GUARANTEED arbonal PERATES EXCLUSIVELY ON WATER PRESSURE AND CO' GAS Sits on a shelf 12"x7" Gives continuous carbonation with economy never known before. No moving parts to wear out. Ends service expense. Carbonates up to 65 gallons an hour. Now . . . Weight 15 lbs Stainless Steel working assembly is in place with one bolt. If ever necessite comes off in a jiffy without disturbness of the comes of the probabilities. Bayers Guarantees to Exchange Working Assembly Any Time in 25 Years for \$25 if Such Should Ever Dealers and Distributors Make fast, profitable, trouble-free sales now. Write today for new brochure on the amazing 1948 Model "S" Stainless IT WORKS LIKE A CHARM! NOTHING TO 10% "x10% "x6%" WEAR OUT Write Dept. 15 BAYERS MANUFACTURING

Denver 5, Colorado

New '600' Humidifier At Chicago Sales Meet

CHICAGO-In a three-day sales meeting held in Chicago recently, the Fresh'nd-Aire Co., a division of Cory Corp., introduced the newest addition to the Fresh'nd-Aire line, the company's model 600 humidifier and bared '48 promotion plans for the new humidifier and the company's line of electric air circulators.

J. W. Alsdorf, president of the company, in describing the new unit said, "in adding the new Fresh'nd-Aire humidifier to the line, we've opened the door on a completely new and unexploited market . . . and we're handing the dealer a unit free of all the headaches involved in the tradein deals and supersaturated markets.

Company engineers explained operation and construction features of the unit in detail; completely disassembled one unit to show detailed mechanical operation; pointed out how air was drawn through a filtering screen over which there is a constant flow of water; and then, after being thoroughly washed and properly humidified, blown gently back into the room.

J. L. Stephens Appointed Lonergan Sales Manager

ALBION, Mich.-John L. Stephens, formerly advertising manager for Gibson Refrigerator Co., has been appointed sales manager of Lonergan Mfg. Co., maker of oil space heaters and furnaces here.

Frigidaire and G-E Take Lead In Illinois **Household Refrigerator User Survey**

81.9% of Those Questioned Have Mechanical Boxes

SPRINGFIELD, Ill. - Frigidaire and General Electric led a field of 14 different makes of household mechanical refrigerators in an ownership survey conducted recently in 41 Illinois urban markets, excluding Chicago, by Illinois Daily Newspaper Markets here.

The survey, made last June and called the Second Annual Consumer Analysis, further revealed that 81.9% of all families in these centers owned mechanical refrigerators.

The following table shows the family ownership of mechanical refrigerators by makes:

Make	Of owner Per Cent	families Number
Frigidaire	19.1	63,210
General Electric	16.6	54,921
Cold Spot	10.8	35,700
Westinghouse	8.0	26,486
Kelvinator	7.7	25.363
Norge		24.637
Montgomery Ward .		18,725
Crosley		12.880
Servel		11,823
Leonard		9.941
Hotpoint	2.9	9.875
Philco		7.794
Stewart Warner	1.4	4.624
Grunow	1.0	3.137
Miscellaneous		19,914
Don't Know		1,783
To get these figure	res. 13.203	2 fami-

lies, representing 3.27% of the 403,138 families in the market covered, were interviewed in their homes, according to Paul L. Gorham, general manager of Illinois Daily Newspaper Markets.

A zoning plan assured that the number of interviews made in each

area would be in proportion to the population of the area and would cover all classes of people, he declared.

The 41 urban markets covered are scattered all over the state.

In the above table, the figures for the number of families represent a projection of the number of families interviewed to an equivalent for the entire population.

Though the figures presented above give the over-all picture, wide variations were noted in individual cities.

Ownership of mechanical refrigerators, for instance, varied from 92.4% in Pekin to 50% in Mt. Vernon.

Among individual brands, similar differences were noted. Frigidaires were owned by 32.8% of the families in Litchfield and by only 10.7% in Moline-Rock Island.

General Electric ownership ranged from 36.5% in Harrisburg to 6% in Kewanee. Coldspots were owned by 22.8% of Alton families and by less than 1% in Charleston.

Kelvinator found its best acceptance in the LaSalle-Peru-Oglesby area where it was in 23.5% of the homes. Westinghouse made its best showing in Canton with 20.9%. Tops for Norge was in Kewanee with

Of all the other makes, only Servel gained more than 15% of the market in any town. That occurred in Springfield where 16.5% of families had Servel units.



When you want a man to "sell his head off" for you give him something he



 That is what we at Coolerator try to do . . . give your men an electric refrigerator they LIKE TO SELL.

COOLERATOR is priced right . . . no "gadgets" or "tinsel" to bump the price up.

COOLERATOR hits right on the button the things a woman wants in an Electric Refrigerator . . . a strong, good looking cabinet, trouble-free . . . with lots of convenient storage space.

We know, because we went direct to women, asked what THEY expected in post-war refrigerators . . . then had the Coolerator models built by expert engineers to these "specifications."

Perhaps most important of all to your men is the fact that COOLERATOR means fine refrigeration to their average prospects. In an actual test, 8 out of 10 women instantly identified COOLERATOR as a manufacturer

And finally, the Coolerator Dealer or Distributor knows he is being backed by strong, consistent advertising in the magazines millions of his prospect families read each month.

Individually, there are probably many other reasons why our Dealers and Distributors are happy with us. But, get one of our Dealers talking about Coolerator and he usually comes up with these six points:

"It's a GOOD refrigerator . . . priced right. Both men and women like it. I don't have to "SELL" them Coolerator because they already know and respect the name . . . My company backs me to the limit . . . and I MAKE MONEY with Coolerator."



President, The Coolerator Company

For full information on Coolerator franchise, write me personally.

The Coolerator Company, Dept. AC-117, Duluth 1, Minnesota

They'll Do It Every Time By Jimmy Hatlo



It's Time To SELL Again!

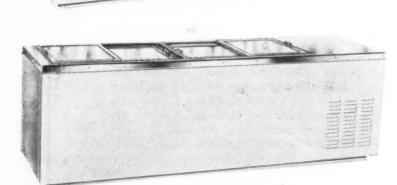
The FRANKLIN LINE



Appearance FOR Performance Dependability

Check These Features:

- All steel welded construction
- Hydroleened insulation
- Easy sliding glass doors
- Smartly styled
- Economical to operate
- Immediate delivery
- Attractive low prices





Several Dealer Franchises **Available**



FRANKLIN REFRIGERATION CO.

Factory and National Sales Office 805 EAST 145 STREET NEW YORK (55), N. Y.

Manufacturers FROZEN FOOD DISPLAY CABINETS . DAIRY CASES . BEVERAGE COOLERS . ICE CREAM CABINETS AN INTERNATIONAL INSTITUTION . SUBSCRIBERS ALL OVER THE WORLD

Trade Mark AIR CONDITIONING AND registered U. S. Paten REFRIGERATION J Est. 1926

Publishing Co.

F. M. COCKRELL, Founder

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VOLUME 52, No. 10, SERIAL No. 972, NOVEMBER 3, 1947

'Hollow Shell' Dealers Are Missing Plenty

T AST week we visited a prominent appliance dealer in an Eastern L small town. After the greetings were over, he shook his head

"Business is terrible. Really. Why, the telephone hasn't rung all day!"

No kidding. That's what he said.

Down the street about a block and a half we found another appliance dealer whose ample window-display space was cluttered up with a heterogenous misarray of home freezers, radios, and traffic items. Here's how he greeted us:

"Know what? Things are going to pot. My customers have been begging me for automatic washing machines. I can't deliver, so I build up a backlog of orders. Last Tuesday I get a shipment. So I get on the phone and call up all these people. Know what? I had to make more than 50 phone calls before I could place those 16 washers they sent me."

Yeah. Business is terrible. If, before the war, that same dealer had rung 50 doorbells and sold 16 washing machines in one day he'd have taken his wife to Chicago and treated her to a new wardrobe at Marshall Field's and a big evening at the Chez Paree.

But now he's complaining.

It is the misfortune of the home freezer business that it has introduced a pioneering product through dealers who have forgotten how to pioneer-or who are too fat with profits to go out and sell again.

Had so dramatically useful a specialty item as the home freezer been dropped into the laps of specialty dealers during the 1930's. gad! what they could have done with it!

Imagine, being able to tell a it-pays-for-itself story like this: Over a five-year period, its annual amortization is.... 45.00 Cost to operate (approx.) per year 10.00 Total yearly cost (first 5 years) per year..... 55.00 Average family food budget (\$50 per month) per year.. 600.00 Average savings (15% per \$ "the freezer way")..... 90.00 Deduct \$55.00 cost, leaves \$35.00 net per year, or over 151/2% return on your investment.

ADDITIONAL SAVINGS: The freezing of leftover food for later use, instead of tossing such "leftovers" into the garbage can adds many extra dollars per year to the real income of a home freezer owner.

Imagine the thrill of demonstrating to a food-cost-conscious housewife that she can actually save money on her weekly allowance by:

(1) Buying food in large packages and quantities (buy by the bushel instead of the pound-buy at wholesale!).

(2) Eliminating "leftovers" which are normally thrown into the garbage can (all perishable leftovers: vegetables, meats, fish, game, bread, cake, etc., can be frozen and saved for later use).

(3) Hedging against rising prices by buying foodstuffs in season; and when prices are low.

(4) Making fewer shopping trips, thus being able to devote more time to other home duties (also, saving bus fares, parking-lot charges, and wear-and-tear on the family automobile).

Wow! What a sales "pitch!"

The old-time "eager beavers" who made the specialty selling business so exciting and rewarding in the 1930's would have jumped on a story like this-and a pioneering product like the home freezer-with eager alacrity, and they'd have made a lot of dough for themselves in so doing.

The home freezer is entering the high profit stage of home appliance development. Those dealers who have enough gumption to understand this, and enough energy to leave the swivel-chair-by-thetelephone and go out to ring doorbells again, will get rich while their hollow-shell brethren slumber.

Visits Service Stations In 2 States



Hi-Speed Tire & Accessory Co. uses this huge Fruehauf trailer in Michigan and Ohio.



A close-up of the trailer's interior shows how compactly the appliances are fitted into the available space. During frequent stops at various service stations the display (complete with fluorescent lighting) is plugged into nearby electrical outlets.

Tire & Accessory Firm Spurs Appliance Sales with 32-ft. 'Touring Display Room'

TOLEDO—Out to remind the public and gas station dealers that it is still active in the appliance business, the Hi-Speed Tire & Accessory Co. has fitted up a big 32-ft. Fruehauf trailer with an appliance display which is now touring Michigan and Ohio cities.

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The Hi-Speed Tire & Accessory Co. is a subsidiary of the Hickok Oil Co. with headquarters here and serves as a distributor in Michigan and Ohio.

Manned by Warner Stowell, representative of the accessory company, and Harry Behrendt, driver, the truck is making stops at the larger Hi-Speed stations throughout the area, in addition to displaying it at some of the county fairs.

Generally on its gas station calls the truck pulls in about noon, parks at the station, opens doors on the right side and rear, and plugs into the station electrical outlets. Displays are attractively lighted by continuous rows of fluorescent lighting.

The appliance display attracts a lot of attention, according to Mr. Stowell, who adds that the truck is usually kept open until well along in the evening.

Compactly arranged, a considerable variety of appliances is on display in the vehicle. These include L & H electric ranges and water heaters, the Everfresh (Franklin Transformer) home freezer, Westinghouse traffic appliances, Superflame oil space

Look to JOHN LEES for

Louding of John Lees for

designed and fabricated stainless steel mouldings are the easiest and least expensive means of swaying consumer preference to your products. Look to mouldings by John Lees to provide lasting beauty and BUY appeal. John Lees mouldings may be formed for an unlimited variety of applications. Hundreds of standard shapes available.

We will furnish recommendations and estimates on your rolling, forming and polishing needs without charge. Send for catalog and circular describing our new ELECTROLYTIC polishing process.

DIVISION OF The SERRICK Corporation MUNCIE, INDIANA, U. S. A.

heaters, Vaculator coffeemakers, Dormeyer mixers and juicers, Remington Shavers, Fada and Puritan radios, T-K replacement units for electric ranges, Champion outboard motors, lighting fixtures, Ken-Rad lamps, and fishing tackle.

Hi-Speed expects to get about eight to nine months' service a year out of the display trailer.

This marks the thirteenth year the company has been in the appliance business, and it is setting out to do a more complete job in this field now than previously, states Mr. Stowell.

E. J. Rommel is manager of the appliance division.

Hi-Speed stations do not attempt to maintain displays of major appliances, but most do show the smaller items.

The dealers, however, are provided with complete catalogs, and use these to obtain customer orders for products not carried in their stock.

Admiral Sales Increase 42% In First 9 Months

CHICAGO — Admiral Corp. and subsidiaries have shown a 42% increase in sales for the nine months ended Sept. 30, 1947, over the same period for 1946, Ross D. Siragusa, president, has announced.

Net profit, after all charges, showed a substantial increase for the same period, he added.

Comparative figures are:

Jan. I, 1947 to Sept. 30, 1946 to Sept. 30, 1947 Sept. 30, 1946 Increase

Net sales \$32,669,223 \$23,021,109 \$9,648,114

Net sales \$32,669,223 \$23,021,109 \$9,648,114

Net profit after
all charges 1,185,449 804,869 380,580

all charges 1,185,449 804,869 380,58
Net profit per share 1.32 .89 .4
(900,000 shares of capital stock outstanding)

SUSPENDED GAS

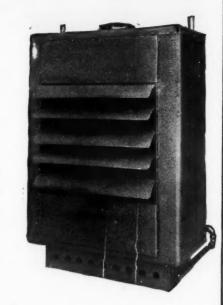
UNIT HEATERS

85—25—165 BTU capacity.

Delivery within 3 or 4 days.

This is a union manufactured Product.

Some exclusive territories are available.



We also manufacture a combination heating and cooling unit, gas fired furnace and the NAT "Self-Contained" Air conditioning unit.

THE NAT CORPORATION

2710 McGee Trafficway

Kansas City 8, Mo.



A GOOD FEATURE TO HAVE ... A GOOD FEATURE TO SELL!



THERMAL INSULATION

*Fiberglas is the trademark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.

What's New



Westinghouse Develops **Electric Sheet for Bed**

MANSFIELD, Ohio-An electric sheet is the newest twist in the field of comfort-heat bed coverings.

Westinghouse's electric appliance division, which developed the sheet, plans to have it on the market in key cities next month at a price under \$30.

R. Z. Sorenson, manager of the small appliance department, explained in his announcement that the new bed sheet was designed for use with conventional bed coverings. The principal requirement is that the electric sheet, identical in operation to the warming sheet in the firm's electric comforter, be spread on top of the regular bed sheets. Then any blanket

or quilt can be used as top cover. Buttonholes around the outer hem of the electric sheet enable it to be attached to a blanket whereon buttons have been sewed, Mr. Sorenson pointed out. In such a manner the consumer can make his own electric

Washing the electric sheet is no problem, according to Mr. Sorenson, since the electrical parts are waterproof. All the housewife need do is to suds the sheet in lukewarm water, rinse, and squeeze dry by hand. It then can be hung out with other washables to finish drying.

Warmth in the electric sheet is maintained by the same control used in the Westinghouse Electric Comforter. Small in size, the Automatic Watchman Control can be placed on a hedside table and set for whatever temperature the user desires. A neon signal glows when the switch is turned on.

Heat for the electric sheet comes from element wires permanently stitched in. As added protection several bi-metal strip thermostats are built into the sheet, the company

Company specifications for the electric sheet, which is fashioned of neutral muslin, report the over-all length as 84 in. and width 70 in. Heated area is 54 x 70 in. At the foot of the sheet an 11-in. non-heated section allows for a tuck-in.

For electrical connection to a 115 a.c. outlet an 18-in. cord connects the foot of the sheet to a 9-ft. cord which runs to the control box. The Automatic Watchman, in turn, connects to a wall outlet by means of a 6-ft. cord.



Apt.-Size Freezer Has Counter-Balanced Lid

MINNEAPOLIS - An apartmentsize 4-cu. ft. home freezer featuring a counter-balanced utility top has been added to its line by Marquette Appliances, Inc., here.

Full-length hinge and clamp-roller type handle are designed to assure an airtight seal. Cabinet of the freezer is finished in white Dulux while the utility top has contrasting black linoleum. Recessed base panel is also black; name-plate and trim are chrome.

Brewer-Titchener Introduces New Beverage Case

BINGHAMTON, N. Y. -A new refrigerated sales cabinet is now being made available by The Brewer-Titchener Corp., to meet present-day needs for display of dairy products and bottled bever-

This new model DCB-12-1 beverage sales cabinet features 141/2 cu. ft. of storage within a cabinet occupying 76 in. by 28 in. floor space. Height of the cabinet is 33% in. which has been found desirable for self-service. Over-all height, including the superstructure panel

is 48% in. It is powered by a 1/4-hp. compressor.

Storage compartment is lined with BTC flooded-plate liner walls. Other construction features are vaporsealed insulation and heavy 16-gauge bonderized steel cabinet and super-



structure. Cabinet has rounded corners, recessed toe-space, and full-

sensitive large-area diaphragm."

The two valves are liquid cross

Types are available to limit pres-

sures to 15, 40, and 55 lbs. on

"Freon-12," and 10 and 30 lbs. on

methyl chloride. Capacities of both

models are 1/2, 1, and 11/2 tons on

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charged and may be mounted in any

position or ambient temperature.

length angle mirror to provide effectiveness for open display and easy access. The beverage sales cabinet is entirely self-contained with simple "plug-in" operation.

"Freon," and 1/2, 1, and 3 tons on methyl chloride, the company stated. **Hotpoint Designs Washers**

CHICAGO-To meet the demand for a new wringer type washer at budget price, Hotpoint, Inc. is introducing two additional conventional washer models to retail for \$119.75 and \$129.75, respectively. The latter model is equipped with pump.

For Low Price Bracket

Each of the models has an eight pound clothes capacity, is



2 More A-P Thermostatic **Expansion Valves Bow In**

MILWAUKEE-Two new pressure limiting, thermostatic expansion valves, designed to avoid possible difficulty caused by motor overloading at sharp peak loads or during pull down, have been announced by the Automatic Products Co. here.

One valve, the model 211, is non-adjustable. The other, the model 212, is adjustable and may be used in place of a standard thermostatic expansion valve of similar capacity, the company said.

Both valves use only one spring and one needle, company engineers explained. "A unique and entirely new diaphragm unit limits the operating suction pressure to a predetermined setting," it was stated.

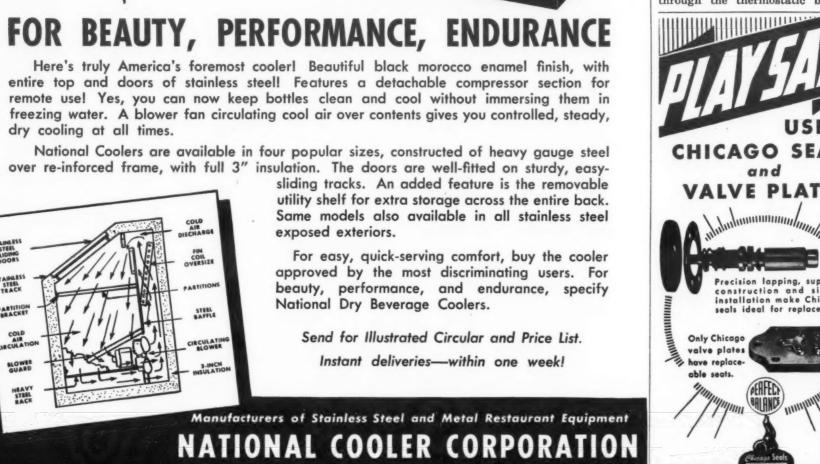
"Should the pressure build up to a point approaching overload, this diaphragm actuates the needle pin. allowing the valve needle to move towards the closed position, until the overload condition has passed.

"Then the valve operates in the normal manner to control superheat through the thermostatic bulb and



skirted in design, and equipped with aluminum thriftivator, by which water is forced through clothes in three washing zones. The new washer, like the deluxe models, has a white Calgloss finish; the wringer is designed with zinc plated drainboard with satin finish.

Concurrent with this announcement, Mr. Truesdell said that the deluxe wringer washers in Hotpoint's home laundry line are now equipped with electric timers so that washers may be set to shut off at predetermined washing time, eliminating guesswork. To meet costs of this engineering refinement, the deluxe washers are now priced to sell at \$139.75 and \$149.75, respectively.



CLEVELAND 15, OHIO

1600 WOODLAND AVENUE

USE CHICAGO SEALS VALVE PLATES Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement. HICAGO





Bev-Kold Cooler Dulux Baked Enamel-White, Green Beige

Model DB 6-21 Self-Contained 291/2" x 40" x 6' long Also 4, 8 and 10' Lengths

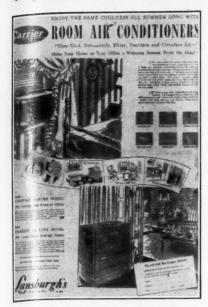
Remote Installation 361/2" High Write For Details

THE BEVCO COMPANY



1512 PINE ST., ST. LOUIS 3, MO.

\$4,000 Advertisement



This advertisement, occupying a full page in a Washington, D. C. newspaper, is credited with helping Lansburgh's home appliance store sell 10 air conditioning units in one day. The store grossed \$4,000 on the sales.

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Air Conditioning Does Triple Job for Campana

BATAVIA, Ill.—Air conditioning is playing a triple role in the huge new four-acre manufacturing plant of the Campana Co., manufacturer of hand lotions, cosmetics, perfumes, colognes, and allied products here.

The industrial air conditioning installation in the new building, which features all-glass walls, separated plant sections for various types of cosmetics, etc., keeps volatile oils, greases, and other ingredients cool through manufacturing, has made the plant so pleasant a place to work that there is little or no absenteeism, and also keeps cool a constant stream of visitors to the factory.

"We decided on air conditioning first to make the factory attractive to employes," a spokesman said. "Next, due to the large number of visitors we have in glassed-in galleries extending the full length of the building, we decided to make their tours cool and comfortable in the same way. Lastly, of course, with most of our products highly subject to heat damage, air conditioning does away with what otherwise might be a substantial loss."

The plant uses exclusively fresh air, filtered, dehumidified, and distributed by small "spider" ducts throughout the building.

Electrical Manufacturers Lead In Increased Sales

PHILADELPHIA — By increasing sales in the second 1947 quarter 117% over those for the same period of 1946, 24 manufacturers of electrical supplies and equipment topped a list of 1,243 companies in 139 industry groups in sales rises, according to the Securities & Exchange Commission.

Eight manufacturers of agricultural machinery and tractors took second place, with an increase of 108.7% over 1946 second quarter

Thirty-five department stores reported sales for the second quarter this year were up 9.5% from the second 1946 quarter. But these sales were 20.8% below those for this year's first quarter.

The 24 electrical supply manufacturers reported their sales in April, May, and June this year increased 24.7%, compared with first quarter.

Total second quarter sales for all 1,243 companies added up to \$23,786,115,000, as against sales of \$22,452,-266,000 in the first quarter of 1947 and \$17,169,010,000 in the second quarter last year.

Roy Predicts:

Not A Store on Knoxville's Gay St. Without Air Conditioning In 3 Years

By George M. Hanning

KNOXVILLE, Tenn.—The air conditioning business is coming into its own here, Ernest W. Roy, vice president and general manager of Temperature Control, Inc., Chrysler Airtemp dealer, firmly believes.

"In three years there won't be a store on Gay St. (Knoxville's main stem) that can afford to be without air conditioning. In five years' time residential air conditioning will be the volume business," he predicted.

"Before the war a city the size of Knoxville did not feel the necessity of having air conditioning. But since the war a few stores have put in air conditioning equipment and all the others feel that they will have to follow suit," he declared.

During September, Mr. Roy said, he did more air conditioning business than in any month prewar. And the equipment is just beginning to come through, he added.

Prior to the war, Mr. Roy had operated his own business for four years in Jackson, Tenn. During the war, he did some engineering consultation work for the government.

Three years ago he decided to settle down in Knoxville and opened a business here in conjunction with J. G. Stumpf, who operated a sheet metal shop. Mr. Stumpf is now president of the Temperature Control, Inc.

At the present time, the firm employs 22 men in the sheet metal shop, 16 in service and installation, five in sales, and two in engineering.

Warning to Novices

Though he is very enthusiastic over the future of the air conditioning business, Mr. Roy has only the gravest of warnings for the fellow who would jump into the business with little capital, experience, and know-how.

"Unless he has these, he won't make any money," Mr. Roy declared. "He will not realize the tremendous amount of service work that is required to maintain an air conditioning job and he will find himself guessing on the capacity needed on a particular job.

"Air conditioning is delicate stuff and needs lots of attention. It is not something that can be installed and forgotten.

"It used to be that one could start up in the appliance or air conditioning business with as little as \$5,000 capital. In those days, the manufacturer and the finance company would carry you along.

"But today, conditions are changed. A newcomer has to have at least \$10,000 to start up even in a small town. He needs a lot of fluid capital if he is going to get any merchandise to sell.

Buys In Spring for Fall Sales

"The dealer has to buy his equipment when he can get it. For instance, I bought up a lot of Norge air circulators last spring. I had to store them all summer for sale this fall.

"Now I have sold every one and it is possible that I may not get any more this winter. That's the way it goes.

"The supply situation is getting better, but we are still receiving only about one-third the merchandise we were getting before the war.

"I believe that demand for appliances in this area reached its peak last year. By that I mean that there were more people wanting equipment then. There aren't so many today, but we are still working from back orders."

Mr. Roy said that the two biggest air conditioning installations that he

is working on at the present time are at the University of Tennessee and in a local church.

The church, he believes, will be the first one in Knoxville to have air conditioning. It will take equipment totaling 75 tons in capacity.

At the University of Tennessee, he said, he is conditioning a new athletic office built into the football stadium. The fact that it is a concrete structure offered its problems, he declared, but they were solved by the use of eight 5-ton packaged units.

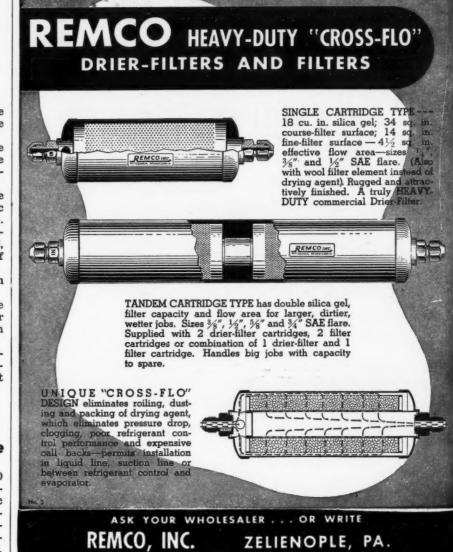
These units were also fitted with steam coils for heating, he said.

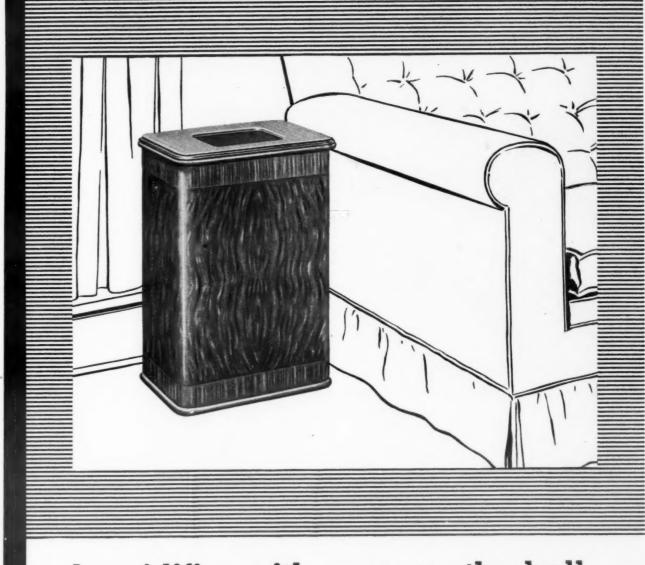
In addition to his work with the firm, Mr. Roy also heads the Major Appliance Bureau, a local association of major appliance dealers.

The Bureau is currently attempting, he stated, to decide on a common policy for instalment credit after Reg. W goes by the board.

Nebraska Utility To Build New Air Conditioned Office

KEARNEY, Neb.—A new \$260,000 area headquarters building to be constructed here for Consumers Public Power District of Nebraska will include a \$35,000 air conditioning system. Natkin & Co. of Omaha submitted the low bid on plumbing, heating, and air conditioning.





a humidifier with more on the ball

This handsome Carrier Home Humidifier has what it takes to do a complete "comfort conditioning" job in the winter home.

It takes no more room than a chairside radio, yet has enough capacity to provide ample moisture to driedout indoor air in your home. It's quiet and self-regulating. Water is completely evaporated before leaving the unit . . . preventing mineral deposits on walls and furniture. Properly humidified air makes your home more comfortable, eliminates rug static . . . keeps furniture and books from drying out and cracking.

Advantages like these give you a winter seller that can't miss. The

demand for a unit that does a better, more dependable job of humidifying winter air is growing fast.

The Carrier Home Humidifier—designed and built with all the skill that makes Carrier the leader in air conditioning—meets that demand. Carrier Corporation, Syracuse, New York.





JACK & HEINTZ CONDENSING UNITS

ALSO

JACK & HEINTZ MOTORS

 $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{3}$ H.P. Capacitor Type

IMMEDIATE DELIVERY FROM STOCK

Wholesale Only

Air Conditioning and Refrigeration Units—Parts—Tools—Supplies

Send for our 47-A Catalog For Wholesale Trade Only

Please write on your letterhead or include proper identification

OF THE NATION'S



PERFORMANCE WITHOUT COMPROMISE

From internal engineering to external finish, every factor in Larkin refrigeration products is flawless in execution. The same constructive ability which originated patented Cross Fin Coils also produces Humi-Temp Forced Convection Units — Bare Tube

and Zinc Fused Steel Plate Coils — Air Conditioning Units-Instantaneous Water Coolers-Evaporative Condensersand other high-grade items demanded in the commercial and industrial refrig-



ORIGINAL PLANT 1934 49,700 SQ. FT.

519 MEMORIAL DRIVE . S.E. ATLANTA . GEORGIA



PRICING SYSTEM PUZZLES INDUSTRY NEWCOMER

Tobin Refrigeration Service Huron, S. D.

I subscribe to the AIR CONDITION-ING & REFRIGERATION NEWS and think it is a great paper when you get all the news about everything new and lots of other valuable information which is a great help to one and one's business

I have not been in the service business very long, but there is one thing I don't quite understand and that is the wide difference in prices on commercial fixtures, especially in display cases.

I have before me three different prices on the same display case. Two are distributors price selling direct to the trade which any dealer can't hope to meet and the other price is a dealer's price which gives him a fair profit. The small dealer is out of the picture when he has to compete with distributors' salesmen and folders selling direct to the trade.

Then there are the beer companies selling beverage coolers and beer equipment, and condensing units to the trade at almost cost. The ice cream companies are selling ice cream cabinets the same way.

The boys in California are to be congratulated on getting a law in their state stopping the above practice. How long would an automobile dealer last if everybody could buy a

new car from the distributor?

From what I can find out, it has always been this way in the refrigeration business and the only business that does it. There is one consolation that the refrigeration parts companies don't sell wholesale to every Tom, Dick, and Janitor.

I never heard of a car distributor selling cars direct to the public at a \$50 to \$100 margin, or the farmer buying his farm machinery that way. Why is the grocery store, the drug store, the meat markets, and everyone else that uses refrigeration equipment, entitled to be favored this way?

A dealer has to have more than a \$50 to \$100 margin if he is to give the customer decent service. give a year free service on all equipment we sell but can't do it on that close a margin.

Maybe I have the wrong view on the subject but it is off my chest.

FRED W. TOBIN

'HARD WORK' COLUMN IS 'REQUIRED READING'

General Electric Co. Bloomfield, N. J.

Editor:

Your column "Inside Dope" in the Oct. 13 issue of your fine publication is very timely.

Certainly, in the Air Conditioning, Commercial Refrigeration, and Automatic Heating business we have no room for people who do not agree that rewards only come through hard

I thought you would like to know that I have made this particular column "required reading" for members of our field sales organization.

J. P. TURNER

SO RIGHT!

Electromaster Inc. Mount Clemens, Mich.

Thanks!! for your remarks on the Converse-Kingston controversy in the

You are so right! There are too many "Kingstons" in all organizations today.

GERALD HULETT

'GREATEST CONTRIBUTION TO THE MOST PEOPLE'

270 Claremont Ave.

Long Beach, Calif. Editor:

Something very important has been going on for quite a while, Time and time again I've said to myself: "I'm going to write a letter and tell the Editor just how much I appreciate this something." But something comes up and I don't do it.

But for right down common sense, valuable information, and unselfish viewpoint no one has made so great a contribution to such a number of people as that man Paul Reed.

Thank you Paul. If you decide to publish your articles in book form please put me down for a half dozen copies.

W. LES WERNER

HUMOROUS, RACY BUT STILL EDUCATIONAL!

Lindahl Finance Co. San Marino, Calif.

Editor:

You will pardon me for not acknowledging receipt of your very fine book, One Foot in the Door before. You no doubt know that I have sold out my interests in the Super-Cold Corp. and retired on Jan. 1. This book apparently came in after I had left and was only recently sent to me. Apparently everyone in the place read it before sending it to me.

I have spent the last five evenings reading this and want you to know that it gave me more pleasure than any book I have read for a long time. The humorous, racy vein in which it is written imparts education the pleasant way. This book should be "must" for anyone in the selling business.

GEORGE LINDAHL

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SPREADING FREEZER STORY

Midland Specialty Co. El Paso, Tex.

Editor:

We would like to use part of your editorial entitled "Double-Barrelled Opportunity for Specialty Dealers: The Home Freezer," recently run on the front page of the Sept. 15 issue.

We wish to emphasize the excellent thoughts on specialty selling which were so very well brought out in this fine editorial.

D. C. GUSTAFSON

KNOW YOUR REFRIGERANT CORROSION LIMITS

EFFECTS OF MOISTURE Moisture in a refrigerating system

may cause any or all of the follow-1. Freezing up at expansion valve or capillary tube, ice in

- the evaporators. 2. Corrosion of metals to form
- sludge.
- 3. Copper Plating.

RESULTS OF TESTS CONDUCTED ON STEEL

Refrigerant	% Water by Weight	Results
Sulfur Dioxide	0.03 0.10 0.15	Slight discoloration Slight scale Heavy scale Presence of air did not affect results
Methyl Chloride	0.02	Slight discoloration Marked discoloration Very slight scale Moderate to heavy scale Presence of air increased corrosion in all case
"Freon-12"		Similar to methyl chloride

FACTS REVEALED

- 1. Corrosion of metals occurs whenever the amount of water present exceeds fairly well defined limits.
- Water reacts with sulfur dioxide, methyl chloride, "Freon-12" and other refrigerants to form acids. 3. These acids react with steel, copper, and aluminum parts of a refrigerating system to form
- 4. In a sulfur dioxide system the amount of moisture tolerable is higher than in a methyl chloride or "Freon-12" system but corrosion, once begun, proceeds more rapidly in a sulfur

definite metallic salts (sludges).

- 5. Corrosion in a butane or isobutane system is due to the direct action of the water and perhaps air, on metals.
- 6. Moisture tolerances are higher for copper-



7. Moisture tolerances are lower at higher tem peratures found in condenser and compressor than at room temperature. 8. Corrosion is much worse in the presence of air

in all refrigerants except sulfur dioxide.

9. Approximately 90% of the sludges produced in refrigerating systems are due to moisture; the others are associated with oil and minor causes



SEND FOR THIS BULLETIN An informative reprint, "MOISTURE and DRYING METHODS," will be sent on request. No obligation. Send for it today. request. No obligation. Send for it ANSUL WHOLESALERS are read equipped to render an intelligen operative service to refrigeration end and maintenance men on problems arise from time-to-time in the operat refrigerating systems.

ANSUL REFRIGERANTS ARE AVAILABLE AT LEADING WHOLESALERS EVERYWHERE

CHEMICA REFRIGERATION DIVISION, MARINETTE, WISCONSIN TRIBUTORS FOR KINETIC'S "FREON 11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113



PLANT expansion is essential to industrial development, to the growth of any business. It's a costly item, too, that has best been met by the investment of additional private capital or ... by the unrestricted re-investment of company earnings. These most effective, most efficient instruments of progress are fundamental to a free economy and free competitive business.

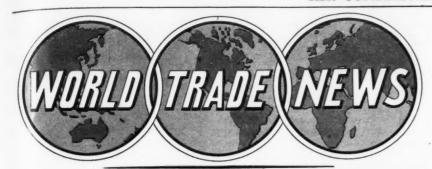
PRESENT PLANT 1947 312,620 5Q. FT.

Physical Growth

To increase its productive capacity, Tecumseh Products Company has executed 10 plant expansion programs, has increased its plant size from 49,700 to 312,620 square feet of floor space . . . and has accomplished this physical growth largely through the reinvestment of reasonable company earnings.

Tecumseh, Michigan





Making Asbestos-Cement Ducts for Brazilian Job



Workers in Brazilian factory of "Eternit," a Swiss concern, are shown turning out asbestos-cement ducts for air conditioning system of Prudencia apartments in suburb of Sao Paulo. This type of duct was decided upon because sheet metal was unavailable in necessary quantities and at reasonable prices.

Trade Notes:

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Philco Sees Exports at Air Conditioning Project New Peak--\$14 Million

ATLANTIC CITY-Dempster Mc-Intosh, president of Philco International Corp., told 85 Philco distributors gathered here from all parts of the world, that the company expects its export volume this year to hit an all-time record peak of

The distributors came from such countries as Latin America, Philco's largest foreign market, China, the Philippines, India, Siam, Palestine, Iraq, and Iceland.

* * 1 Firm to Serve Industry

NEW YORK CITY-Formation of Empiria Corp. here to export electrical and mechanical engineering equipment, with particular emphasis on air conditioning and refrigeration items, was announced by Frederick Fisher, vice president.

The corporation, located at 149 Broadway, New York 6, was formed in collaboration with its London associate, Empiria Products, Ltd. Among directors are Mr. Fisher and H. K. Harrison, both of whom are directors of the London company.

Empiria Products has been exporting principally to India, the Middle East, and South Africa for a number of years, it was reported.

. . . Jordon Names Two Agents

PHILADELPHIA - Jordon Refrigerator Co.'s export division announces the appointment of John J. Carroll agent for Venezuela and Y. Kitagawa as sales agent for

Mr. Carroll will make his headquarters at Apartado Postal 1522, Caracas. Headquarters of Mr. Kitagawa, who heads Wahiawa Importers, Ltd., will be at 135 Kam Hi-Way, Wahiawa, Oahu.

General Mills' Agency

CHICAGO-A. J. Alsdorf Export Corp. here has been appointed export sales department for the home appliance department of General Mil's, Inc., according to an announcement by W. L. Young, vice president of Alsdorf.

Mr. Young said his firm will handle sales of the General Mills appliance line in all countries except the United States and Canada. Other lines handled by Alsdorf inc'ude Fresh'nd-Aire circulators, Universal gas ranges, and Filter Queen vacuum cleaners.

De Lara In Bendix Post

SOUTH BEND, Ind .- Appointment of Arthur Perez de Lara as sales and service manager in Latin America for Bendix Home Appliances, Inc., was announced by Harlow K. Lyons, export manager. He will contact the company's 20 distributors in Cuba, Mexico, Central America, and South

Brazilian Firm Describes

DETROIT—Additional information on the nine-story Prudencia apartment building in a suburb of Sao Paulo, Brazil, which is to be completely air conditioned, has been received by the NEWS from Starco Limitada, of Sao Paulo and Rio de Janeiro, exclusive representative of The Trane Co.

A story on this project was published in the July 7 issue of the

The building will have 36 standard apartments, four on each floor, and two penthouses. The air conditioning system involves the use of 38 individual Trane Climate Changer units, which offer individual apartment conditioning for each tenant.

H. R. Bodanzky, of Starco (Sociedade Técnica para Condicionamento do Ar), wrote that all final drawing, design, installation, and erection of the machinery, as well as of the ductwork, electrical wiring, and plumbing for heating and cooling is being done by the installation department of his

These activities are supervised, he said, by the consulting engineer, Admiral J. Lomba, and architect Rino Levi. The building was designed by Mr. Levi and his associates, Roberto Cerqueira Cesar and F. A. Pestalozzi.

"Mr. Rino Levi is one of the leaders of Brazil's world-famous modern architects and he designed this building not 'modernistic' but 'modern' (or 20th century), the difference meaning everything among modern architects," Mr. Bodanzky pointed

"We wish also to report," the writer continued, "that the ductwork was designed by our engineering department according to specification by the consulting engineer, Admiral Lomba, and that we placed the order with the Brazilian subsidiary of the Swiss world concern 'Eternit,' and not with their local competitor 'Brasilit,' as stated in your article.

"Only through the great cooperation of the Eternit people in price and delivery terms was the whole job possible, as there was no galvanized or aluminum sheet metal available in the necessary quantity and at reasonable prices."

(Mr. Bodanzky was referring to the asbestos-cement ducts manufactured at the Eternit factory.)

"Last but not least," Mr. Bodanzky said, "we would like to call your attention to the fact that our company, in the quality of exclusive representatives of The Trane Co., landed this job which is valued at about U. S. \$150,000 against very hot competition in an open and fair contest among four of the leading local representatives of U.S. factories, being the lowest bid-only 8% below the highest."

Mr. Bodanzky was at one time associated with General Electric's air conditioning department in Rio de Janeiro and represented Carrier in

Finds Few Swiss Housewives Have or Want Refrigerators

NEW YORK CITY-In Switzerland, where the standard of living is said to be the highest in Europe, nearly 94% of the housewives interviewed during a recent appliance survey do not own a refrigerator.

The survey, made by Dr. Eric Stern, Foreign Market Research, New York City, showed that only 3.1% of non-owners questioned indicated a willingness to purchase a refrigerator.

Sewing machines were the item most widely owned, while vacuum cleaners were in the greatest demand among non-owners, followed by washing machines.

Partial results of the survey fol-

		Does		Prospects as
	Owns	not own	Will buy	per cent of
Appliance	%	%	%	non-owners
Sewing machine	83.3	16.8	2.2	13.1
Vacuum cleaner	49.8	50.2	14.2	27.5
Washing machine	15.7	84.3	13.6	16.1
Pressure cooker	9.7	90.3	4.1	4.5
El. Coffeemaker	6.6	93.4	.8	.9
Refrigerator	6.1	93.9	2.9	3.1
El. Floorcleaner	2.7	97.3	7.0	7.2
Dishwasher	1.2	98.8	7.5	7.6
El. Mixer	.6	99.4	2.5	2.5
El. Ironer	*	100.0	1.4	1.4
*less than .1 of 1%				

Indian Firm Changes Address

GWALIOR, India-The Ice Machinery Mart announces it has tem-

porarily changed its headquarters from 18/2 McLeod Rd., Lahore, to Victoria Rd., Gwalior (G.I.P.), where all communications should be sent.

CHECK WITH Ranco FIRST

Specialists in Refrigeration		Less Stock to Carry
More Ranco Controls in Use	V	Greater Customer Satisfaction
Dependability		More Profit For You

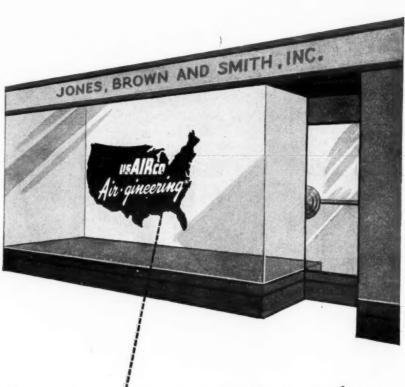


You're right the first time when you work with Ranco Refrigeration Controls. Designed for dependable service, Ranco Controls help eliminate expensive, timeconsuming call-backs. Replace with Ranco Refrigeration Controls and be sure of long-life, troublefree service that pleases you and your customers. Ranco Controls are available at leading wholesalers . . . see your Ranco wholesaler today or write direct to Ranco Inc. for complete informa-

Ranco O-1414 and O-1477 Controls are designed for milk cooler use where the temperature at control, or on the capillary tube, may at times be lower than the controlling temperature.



World's Largest Manufacturers of REFRIGERATION CONTROLS



There's a new service coming to your town!....

Tt won't be long, now. usAIRco has definite plans for an Airgineering office in your city. It will be owned and operated by local men . . . and it will be the toughest and cleanest competition ever to hit your market!

What is Air-gineering? It's a new service in air conditioning based on an old idea. The idea is this: The happiest kind of selling is creative selling. It begins with good advertising and sales promotion. It develops with the expert, helpful survey and planning service the Air-gineer can offer. It follows through with the finest kind of engineering counsel, every step of the way.

Are you the logical man to own the Air-gineering office in your town? Write us, and tell us about yourself. In return, we'll send full details of our plan and a copy of our inspiring book "USAIRCO Air-gineering." It's the chance of a lifetime!

UNITED STATES AIR CONDITIONING CORPORATION Minneapolis 14, Minnesota

*Trade Mark Registered

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NAME		
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United States Air Conditioning Corporation 3324 Como Ave. S.E., Minneapolis 14, Minnesota		

we're telling all your customers
USĀĪĀCO
Air gineering GIVES YOU ALL
THE AIR YOUR TRAFFIC WILL BEAR
COOLING SYSTEMS AT 3 BUDGET LEVELS

Delivery Truck, Shop on Wheels Combined

Thomas Rady of Amsterdam, N. Y. owns this neat looking, modern refrigeration service truck. Its specially built body, Mr. Rady tells us, provides a large capacity for delivering appliances and leaves enough room inside for a miniature shop capable of handling minor repairs.



Butane Group Protests

markets were protested here in a

resolution adopted by board of di-

rectors of National Butane-Propane

Association at the organization's

Also protested was the use of tank

cars or other transportation in con-

nection with such export until such

time as the supply of these gases and

tank cars "exceed the normal and

necessary needs of citizens of the

United States." Copies of the resolu-

tion are to be forwarded to the

State and Interior Departments, to

the members of Congress, and to

The association will not, from the

date of meeting, name an official

delegate to serve on the agricultural

development committee of American

producers in this country.

second annual convention here.

Rolls Royce, Bentley **Air Conditioned Autos** Shipped Here by British

NEW YORK CITY-Air conditioning will be one of the features of the new model Rolls-Royce and Bent-

The first postwar shipment of the

sell for \$18,450 to \$19,100 and the

First local showing of the cars is

Cornelius Settlement Plan Confirmed by Court

MINNEAPOLIS - The Cornelius Co. here has resumed operation of its business following confirmation by the U.S. District Court of the firm's plan to settle with general creditors for 10 cents on the dollar, according to an announcement by Brace Bennitt, former operating receiver.

It is understood that the manufacturing of beer dispensing equipment, with possible new additions, will be continued by the company. Richard Cornelius is again president and in charge of the business.

Mr. Bennitt, who is executive secretary of Associated Creditors, Inc., said Cornelius' second amended plan was confirmed after having been accepted by the majority of creditors in number and amount. Dividend checks were being mailed out by James E. Bain, the disbursing agent appointed by the court, he said.

Payment of obligations owed the War Assets Administration and the Reconstruction Finance Corp. is to be amortized over a period of time.

Tempcon, Inc. Elected To REWA Membership

CINCINNATI - Tempcon, Inc. of Minneapolis has been elected to membership in the Refrigeration Equipment Wholesalers Association, reports H. S. McCloud, executive secretary of the association.

Officers of Tempcon, Inc. are J. W. Wheeler, president; Eugene A. Coulter, vice president; W. H. Anderson, secretary; and P. B. Schoenholz,

Conflicting Government Regulations Harass Truck-Trailer Refrigeration

SAN FRANCISCO — The special problems presented in mobile refrigeration were discussed by Douglas Albert, chief engineer of the Fruehauf Trailer Co. of California, in a paper on "Truck-Trailer Refrigerapresented before the San Francisco Section of the American Society of Refrigerating Engineers at its September meeting.

"The reasons why mobile refrigeration is much more difficult than fixed refrigeration result not only from the ever-changing physical conditions which confront a vehicle on the road, but from the conflicting government regulations which affect all motor transportation," he declared.

"The unjustness of many of these restrictions are aggravated when applied to refrigerated trailers because of the weight of insulation and means of refrigeration which must be carried to permit these units to function. It is highly important that the leastfavorable restrictions governing the maximum length, weight per axle and over-all gross weight be considered prior to making recommendations for the purchase of specific refrigerated vans.

"An important fact to be stressed to prospective buyers is that a refrigerator van is not designed to be used as a cooling plant. The payload should be pre-cooled to the temperature at which it is to be transported before it is placed in the trailer. Even when it is possible to chill the payload to some extent, an inappropriate burden is placed on the means of refrigeration used. This increases operating cost, or overloads the refrigerating unit, or both."

Citing the four principal methods of refrigerating truck-trailers as wet ice, dry ice, "hold-over" plates and mechanical refrigeration, Mr. Albert asserted each type "not only has its own definite advantages and drawbacks, but each has a great many users who think highly of it. Favor of all types is justified because each serves to outstanding advantage under suitable conditions."

However, said Mr. Albert, mechanical refrigeration from a number of standpoints has proved the most practical solution in vans used to haul a great many kinds of com-

modities, especially where hauls are

"But no matter what type of refrigerating system is used," he said, "the trailer must be insulated for the loads it is to carry and the conditions under which it is to operate. Refrig. eration can only attempt a hopeless task if the trailer is inadequately insulated.

"The insulation must have many characteristics which are not essential in insulation used in fixed refrig. erators. It must be light in weight because weight is one of the most important factors in mobile refrigeration. It must have a low K-factor. The vehicle will be subject to constant shock and vibration; therefore, it must be durable and have no tendency to settle, sag, pack or disintegrate. It must not absorb moisture in appreciable quantity, and it should permit moisture that is absorbed to be evaporated rapidly. It must be fireproof and vermin-proof."

Tests have shown that because of structural necessities the K-factor of insulation must be doubled to arrive at a more practical estimate of the actual heat conduction of an insulated vehicle, according to Mr. Albert.

"The primary purpose of a mobile refrigeration system," he said, "is to absorb the heat which passes through the insulation as well as the heat that gets into the vehicle when the doors are opened."

Refrigerated, Insulated Van **Output Drops 20% In August**

WASHINGTON, D. C .- Production of insulated and refrigerated trucktrailer vans in August dropped nearly 20% from July and shipments on these vans declined slightly, the U.S. Bureau of Census has reported.

Tabulated reports show that 135 insulated and refrigerated vans were produced in August and 229 were shipped. In July 168 vans were made and 236 shipped

Figures were based on reports from 106 plants manufacturing truck trailers, representing all known plants manufacturing truck trailers with a rated capacity of 5 tons or

New Foreign Markets ST. LOUIS-Establishment of new foreign markets and further exportation of butane and propane gases from the United States for such

ley automobiles soon to be delivered regularly to this country from England, according to spokesmen for the manufacturer.

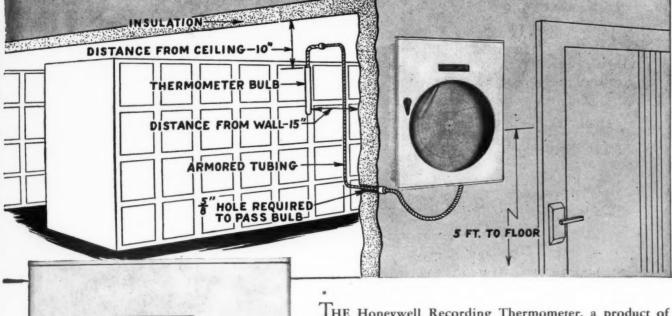
cars arrived here recently. Besides air conditioning, the autos feature custom-built bodies, more powerful engines, electrically-operated windows, and sliding roofs.

Spokesmen said the Rolls would Bentley for \$12,900 to \$17,700.

set for Nov. 6 and 7 at the Waldorf-Astoria hotel. The cars will be taken on a four-month exhibition tour of 14 American cities from coast to

A Safeguard for LOCKER PLANTS and CUSTOMERS

Petroleum Institute.





Honeywell Recording Locker Room Thermometer, Model No. 645101; Chart No. 12777, Range -30° F. to +70° F., reverse. 12" diameter, seven-day revolution with one-hour time divisions. Has hand-wound chart drive as standard installation. Electric clock drive optional — self-starting synchronous electric clock, 115/230 v., 20-50-60 cycles. Equipped with 5' of bronze armored tubing and stainless steel bulb with 10" extension neck.

CONTROL SYST

THE Honeywell Recording Thermometer, a product of the Brown Instrument Division, provides permanent and continuous chart records of temperatures—day and night convincing proof to locker plant patrons that temperatures are held constantly within safe limits to protect their property against spoilage.

Honeywell Locker Thermometer temperature chart records are accurate. They promote customer good willthey safeguard locker operators against possible damage claims because they furnish irrefutable evidence that correct temperatures are maintained. The large, easy to read charts and the streamlined appearance of the thermometer add prestige and distinction to the plant.

In states where recording thermometers are mandatory, Honeywell thermometers fulfill every legal requirement. If your state has not passed this legislation, don't waitprofit now by having your own men install the accurate and dependable Honeywell Recording Thermometer. Order from your wholesaler or mail the coupon.

Mail this Coupon Today

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY 2659 Fourth Avenue South, Minneapolis 8, Minnesota Please send detailed information about the Honeywell

Recording Thermometer for locker plants.

HIGH IN QUALITY-

OUNTAIN EQUIPMENT



Aggressive fountain dealers who want a high quality line of fountain equipment will find that "Everfrost" will give them a complete line of equipment that is priced right. Two and three sink bobtails...complete soda fountains with or without sink sections . . . ice cream cabinets and luncheonette equipment. Here is a line which will be a real money maker for you. Write or wire today for complete franchise information.

8701 South Mettler Street . Los Angeles 3, Calif.

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W.E. Dennis Appointed To Be General Manager Of Salem's Refrig. Div.

SALEM, Ohio - The Salem Engineering Co. announces the appointment of W. E. (Dick) Dennis to the

position of General manager of the Refrigeration Divi-

Refrigeration distributors of the Salem Engineering Co. will deal direct with him at his headquarters in the company's main ofbuilding at Salem, Ohio.

Mr. Dennis has been with the com-W. E. Dennis pany eight years, prior to his recent appointment being general supervisor of operations.

Kennard Announces New Unit Heater Models

ST. LOUIS-A new line of horizontal propeller type unit heaters, a catalog describing the heaters, and the appointment of three new factory representatives in Detroit, Cincinnati, and Dallas, have been announced by the Kennard Corp. here.

The heaters are made in 10 different models ranging in size from 12 % in. by 91/2 in. by 161/4 in. to 27 in. by 11 in. by 341/4 in.

They feature a floating heating coil to eliminate the stress and strain of expansion and contraction. Coils are guaranteed to withstand pressures up to 150 lbs. per in.

Plate type aluminum fins, continuous in width and depth, are spaced six to the inch by means of deep drawn contact collars. They are tightly and permanently bonded to the tubes by the Kennard hydraulic process, the firm said.

Both condensing tubes and headers are copper brazed to each other to form an integral assembly of tubes and headers, it added.

Motors, fabricated by leading motor manufacturers, are available for single or multi-speed operation, and single phase, polyphase, or direct current, it declared.

Factory representatives appointed

David S. Falk of Detroit, who will represent the company in Michigan. M. A. Schneider, president of the Consolidated Engineering Sales Co. of Cincinnati, who will cover the Cincinnati trade territory, and

The Rodgers-Barbeck Co., which will cover the general Texas area.





Howard B. Barber V.P.

CHICAGO-Howard B. Barber, formerly group manager of major household appliances, radios, and stoves for Montgomery, Ward & Co., has joined Brunswick-Balke-Collender Co. here to fill the newly created position of vice president in charge of sales and merchandising, Brunswick has

Reliance Products Named Distributor for Whiting

MIAMI, Fla. — Appointment of Reliance Products Co., Inc. here as distributor for Whiting food freezers in Florida and south Georgia has been announced by Howard Roberts, vice president in charge of Whiting's refrigeration division.

Reliance, which is located at 1418 Congress building, is headed by Gustaf Lindquist. It distributes a complete line of home appliances.

Brunswicke-Balke Names M-H Sees Sales Volume 'Psychrometry Brochure' Of \$60 Million for '47 Published by ASRE

MINNEAPOLIS — After a sales slump during the second and third quarters caused chiefly by restrictions on new installations of gas furnaces, the Minneapolis-Honeywell Regulator Co. here reports an increased demand for its products that is expected to bring its sales for the year close to \$60,000,000. Sales for 1946 amounted to \$45,900,000.

If the predicted level is reached, the company anticipates that it will be able to raise earnings this year to about \$5 per common share for the biggest net profit in its history. In 1946, net earnings amounted to \$3.87 per share.

By the end of the year, the company also expects to have its \$4,000,-000 expansion program almost completed. The program was 65% complete at the end of last year.

The second and third quarter slump was caused, the company explained, by its inability to shift quickly production of gas furnace regulators and controls to other instruments.

Simplifies Calculations

NEW YORK CITY-The American Society of Refrigerating Engineers has issued the booklet "ASRE Brochure on Psychrometry," pre-printed from the 1948 Sixth Edition Basic Volume of the Refrigerating Data Book. It presents data which will simplify engineering calculations in

psychrometry.

There are three complete psychrometric charts covering the low, normal, and high-temperature ranges. The new charts are extremely easy and convenient to use as they give precise results through the use of enthalpy deviation lines drawn directly on the chart. In addition, it is easy to make the adjustments for rejected or added moisture when this refinement is desired.

Adequate tables are included which make it possible to adapt the charts for solving problems when the barometer or altitude deviates from standard. The very complete psy-

chrometric tables on the thermodynamic properties of air and steam, which are included, were prepared by Prof. C. O. Mackey of Cornell university; the brochure was written by E. P. Palmatier of Carrier Corp., and D. D. Wile when he was associated with Carrier.

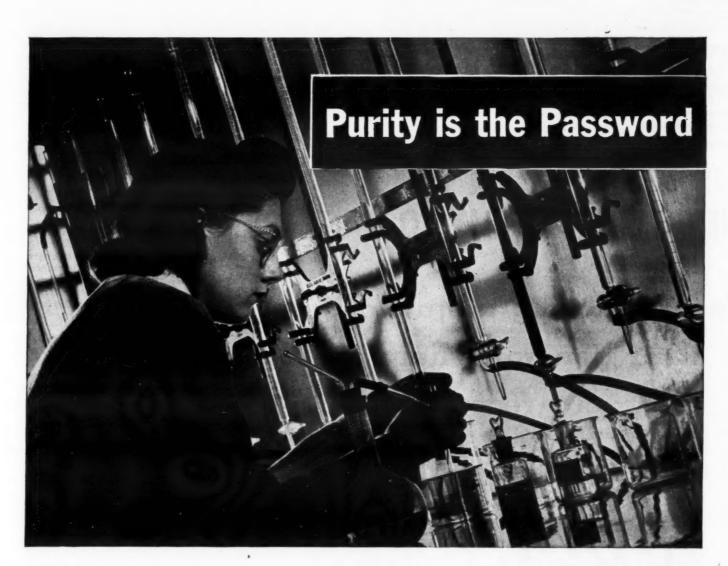
Copies may be obtained from ASRE headquarters, 40 West 40th St., New York City, for \$1 per

Valve Manufacturer Leases New Factory

STRATFORD, Conn.-A new industrial plant of 100,000 sq. ft. here has been leased by Manning, Maxwell & Moore, valve and gauge manufacturer, it has been announced.

The new plant, to which some of the firm's Bridgeport operations will be transferred, is said to have 80,000 sq. ft. of manufacturing space on one floor and 20,000 sq. ft. of office space on two floors.

About 500 workers will be employed in the new plant, it was reported.



Laboratory Control Insures Purity of "Freon"—Helps Cut Maintenance Costs in Air Conditioning and Refrigerating Systems

making volumetric analyses that help insure the efficient, trouble-free operation of refrigerating systems in which "Freon" safe refrigerants are

By titrating samples withdrawn from different parts of a "Freon" plant, the purity-both of raw materials and of "Freon" itself-is controlled and maintained. Each analysis must conform to rigid specifications, and purity is the password. This is but a small part of the huge

The laboratory technician above is control program that guarantees the intricate, precision-made parts quality and uniformity of all "Freon" refrigerants.

> "Freon" refrigerants are as pure as scientific methods of manufacture can make them. They are free from acids, contain a low volume of insoluble gases and are now amazingly dry. For example, "Freon-12" dichlorodifluoromethane refrigerant contains less than 10 parts of moisture per million parts of "Freon"! These important properties of "Freon" safeguard modern, compact equipment . . . protect

against corrosion, oxidation or other damage which leads to costly shutdowns and repairs.

When you plan air conditioning or refrigerating installations for commercial or industrial purposes or the frozen foods field, be sure to specify equipment designed to utilize 'Freon' safe refrigerants. Kinetic Chemicals, Inc., Tenth and Market Sts., Wilmington 98, Delaware.

OUTSTANDING FEATURES OF "FREON" SAFE REFRIGERANTS

- 1. Freedom from moisture... now less than 10 parts per million.
- 2. Narrow boiling point range—confined within limits of 1/2°C.
- 3. Less than 2% of air in vapor phase.
- 4. Freedom from acids. There are none in "Freon."
- 5. Freedom from high and low boiling products.
- 6. Non-toxic . . . non-flammable . . . non-explosive.







New Type of Promotion

Home Freezers, Locker Plants Complement Each Other, Radio Roundtable Emphasizes

KANSAS CITY, Mo.—Promotion of frozen foods and the means of preserving them by explaining how home freezers and locker plants complement each other rather than compete is the main theme of a transcription made from a radio broadcast which featured the annual convention of the National Frozen Food Locker Association here.

Representatives of freezer manufacturers—W. Paul Jones of Philco Corp. and J. A. Smith of Frigidaire—participated in a round table radio discussion with locker plant operators led by E. G. Spencer, Harry Flory, and Keith J. Bauder, NFFLA officers, while the "referee" was Miss Nita Orr, home economics and frozen food consultant for the Appalachian Broadcasting Co. and assistant secretary of the Virginia locker association.

Other "neutral" participants in the broadcast, which went out over WDAF, Kansas City, included K. F. Warner of the U. S. Department of Agriculture, and John Ogden, publisher of Food Freezing.

Pressings Available

"Pressings" made from the transscription of the broadcast are being featured at local and state locker meetings, and are available for general use, according to George B. Schiemer of the NFFLA public relations office.

A number of interesting ideas were brought up during the discussion, a few excerpts from which follow (in script form):

Spencer: We of the locker plant industry know that the home freezer manufacturers and the locker plant operators ought to get together. . . .

Jones: We "zero" refrigerator manufacturers know that our cabinets and your locker plants go hand in hand. As a matter of fact, we are dependent upon the locker plant for the perfect use of the "zero" refrigerator.

It's 'Zero Refrigerator'

Orr: That's an interesting statement, Mr. Jones, and we'll get back to that, but you said "zero" refrigerator—let's talk about that for a minute. Are you calling the home freezer a "zero" refrigerator?

Jones: Yes, I am.

Orr: Any reason for that, or did you just want to be different?

Jones: Oh no, not that. "Zero" refrigerator describes what this appliance actually is. Neither the word "home freezer," nor the words "home storage unit" tells the whole story.

After all, a little freezing and a lot of storing can be done success-

fully in most any of these cabinets regardless of who the manufacturer is. We are accustomed to using the familiar household refrigerator for our fresh foods. Well, this cabinet is just another refrigerator kept at a different and lower temperature.

But we can keep frozen foods in good condition in this one just as we kept fresh foods in good condition in a household refrigerator. That is why we think that "zero" refrigerator is a good name for this cabinet.

[Next followed some comments on the alleged competition between freezer manufacturers and locker operators, which was resolved as follows:]

Relationship Not Clear

Ogden: It isn't that you haven't been on friendly terms with each other—it's not that you have run each other down. It's just that you haven't made your relationship clear to the public. The locker plants—more than 9,500 of them over the country—have sprung up with a new way of preserving foods.

Along comes a small appliance that can be put in the home, and so far as the public knows—or can see—it does the same thing the locker plant does. So without proper consumer education, naturally the public is confused and draws its own conclusions.

To keep these conclusions from ending in harm to the public, it seems to me the "zero" refrigerator manufacturers and locker plant operators should publicly work more closely together.

One Helps Out the Other

Jones: We can't have an adequate frozen food program unless the two do work together. We, the "zero" refrigerator manufacturers, know that if our units are used in connection with the services of the locker plant that they give greater satisfaction.

Spencer: And we locker men know that the locker patron who has a "zero" refrigerator at home is our best patron. That is proved every day in locker plants.

Jones: Why shouldn't he be? Do you realize that an average family of five—dad, mom, and three youngsters, need some 8,500 lbs. of food each year to be moderately well fed? Over four tons of good food per family per year.

Food Handling 'Retooled'

Buying or growing that much food is a major job—and preserving it, storing it, and having it convenient, needs proper equipment. Families with both the locker and "zero" refrigerator have retooled their food handling setup. Why shouldn't they use both liberally?

Orr: Mr. Jones, you say it takes about 8,500 lbs. of food to feed a family of five for a year. That includes everything they eat, I suppose?

Jones: Sure, that includes the milk, cereals, citrus, potatoes, sugar, etc. . . . all that is normally used fresh, or stored in the cellar or pantry. But that 8,500 lbs. also includes some 2,500 lbs. of meat, poultry, butter, fruits, and vegetables that can and should be stored in the freezer.

What To Leave Out?

Whether a family grows its own, buys at wholesale, stocks up for convenience, or freezes ready-cooked foods, the problem of the family often is not what to put in the freezer, but what to leave out, due to space limitations in the home "zero" refrigerator.

Now with quantity freezing and bulk storage in the locker plant combined with convenient "zero" refrigerator storage in the home—gosh—that looks to me like a real answer.

Orr: The convenience part is

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obvious, but is it more economical? Spencer: Here, Mr. Jones, let me answer that. Definitely, it is more economical. Families can make bulk deliveries of home-grown foods to our locker plants for processing and storage. They can purchase quantities of other foods when they are plentiful and price seems right. And lastly they can take an assorted supply from our bulk storage when in town on other errands.

Bank and Purse Concept

Orr: Are there any other reasons why the "zero" refrigerator and the locker go together? How about that bank and purse idea?

Jones: That illustration is as good as any as far as it goes. The locker plant can be considered that bank where the family stores the bulk of its food. The "zero" refrigerator is the purse where the change is kept after it's been drawn out of the bank. Once it is brought home to the purse, it has rapid turn-over and is replenished again and again from the bank.

But that isn't the only function of the locker plant, either. The service they give in some instances make the use of the home unit possible.

Orr: Getting back to a locker operation now—Mr. Spencer, what are some of those services available at a locker plant that can be used to make the home unit more valuable, and in some cases, possible?

Meat Processing Vital

Spencer: The biggest and most important service the locker plants have to offer that the users of "zero" refrigerators can take advantage of is their complete service for meat... The locker operator is often in a position to locate meat for his patrons. He can see to the slaughtering, the proper chilling.

Most important of all, the meat is frozen by heavy-duty refrigeration equipment that can take care of the freezing job adequately. There is no fluctuation of temperatures caused by putting a large quantity of warm

(Continued on Next Page)

WE NEVER KNEW WE HAD SO MANY FRIENDS!

We are most grateful to them for their generous help during our recent fire.



Harold L. Schaefer, President

Schaefer, Inc. would not be open for business this morning were it not for the heroic efforts of the Minneapolis Fire Department.

(Reprint of our advertisement in Minneapolis newspapers, Monday, Oct. 20)

ACTUALLY, WE HAVE NEVER BEEN OUT OF BUSINESS!



Words Across the Table



W. Paul Jones (right), vice president of Philco Corp., and E. G. Spencer (left foreground) exchange friendly banter during the roundtable broadcast on home freezers and locker plants at the locker convention in Kansas City. Other participants included (l. to r.) Keith Bauder, Harry Flory, John T. Ogden, Nita Orr, K. F. Warner, and J. A. Smith of Frigidaire. Miss Orr was "referee"; Smith and Jones represented freezer manufacturers; Spencer, Flory, and Bauder, locker operators; Ogden and Warner, "neutrals."

Renting Locker Stimulates Greater Use Of Freezer, Discussion Group Agrees

(Concluded from Preceding Page) food in the place where the already frozen foods are stored.

The "zero" refrigerator comes into the meat picture right there, but only after the animal has been slaughtered, properly chilled, packaged, and frozen.

Jones: You're right about the whole animal, Mr. Spencer, but how about those chickens that can be killed and dressed a few at a time at home at the convenience of the homemaker? It's far better to have a "zero" refrigerator at home to freeze them in than to have to run to the locker plant with two or three chickens.

Large Amounts Desirable

That's like having to make a special trip to the locker plant with a few boxes of berries and beans. That would hardly be called economical, would it?

Spencer: Let me comment on that. You're right, of course, about the two or three chickens or the few boxes of berries and beans. It seems to me a better plan to get those chickens ready to kill in larger lots, maybe all at one time, then take them all to the locker plant . . . and the whole nasty job can be done right there by professionals.

Then you can take home a few at a time, and there is a whole chunk of wisdom in that, because that saves dispositions in the distaff side of the family, if you know what I mean. And, I tell you, gentlemen, that's an important point to consider in this whole setup. . . .

Wider Food Purchases

Jones: We who manufacture "zero" refrigerators feel that one very good thing that the locker plants are doing is the merchandising of commercially packed foods.

ing of commercially packed foods.

Now that locker plants are into

that phase of food merchandising, the "zero" refrigerator owner who goes to his locker to get a week or two weeks' supply of meat, maybe chickens, and some of his own fruits and vegetables, then has convenient access to other things to add to them . . . all sorts of fish and seafoods . . . fruits that are not native to his own section, as well as some special precooked foods.

Look Ahead, Cook Ahead

Spencer: Talking about those precooked foods, that's where it is wonderful for a locker renter to have a "zero" refrigerator. She can look ahead and cook ahead a part of the time and freeze that cooked food right there at home; save leftovers, We of the locker plant industoo. try like that, for the homemaker that knows how good and how easy it is to prepare pre-cooked foods, and she buys more of what we have to sell when perhaps she doesn't have the time, space, or inclination to do her own.

Keeping Freezer Filled

Jones: May I have another word right here? If you locker men can work out some way by which you can deliver those supplies and keep those "zero" refrigerators filled from the patron's locker and from your own commercial supplies, we'll be getting somewhere. Now that is a real service to the home-maker, isn't it, Miss Orr?

Orr: It certainly is, and I understand that is being done in some places. What do you think of the locker plant renting "zero" refrigerators to their patrons and keeping them filled? Couldn't that be a bigger service to more people than if the plant limits that service to those who own "zero" refrigerators?

Spencer: Yes, and that is being done in some places.

Maintaining 'Complaint Book' Helps Operator Keep Patrons Satisfied

DENVER—About the most practical way to build up goodwill among locker customers is by helping them to solve common problems, according to Duane Horney, head of Horney's Locker Storage, near First and Broadway, here.

"We keep a complaint book in which we list all the difficulties which housewives have encountered in utilizing either our commercial locker service, or in the use of their home freezers," Mr. Horney said.

"As soon as any problem becomes frequent enough to indicate a need for a solution, we experiment until we can recommend the proper solution. In this way, rendering an extra service keeps up goodwill and has often brought in new customers who have been sent us by our own satisfied patrons."

A typical example of this gratuitous service is "freezer burn" prevention. When many customers of the store started complaining that meat in frozen storage developed discolored spots and ragged, porous edges where the meat had come in contact with freezing coils, or cold walls, causing a disfiguring "freezer burn," Mr. Horney went to work on the problem immediately.

One solution, he found, was to place the meat in such a way that plenty of air circulation would transfer cold to it without the meat coming in contact with the freezer wall or coils. This, however, was only a partial solution, inasmuch as many customers always insist on keeping their lockers so well filled that there is just no way to prevent contact.

After much experimentation, Mr. Horney found that plain, old-fashioned lard was the ideal solution. The easiest way to prevent freezer burn in advance, he tells his customers, is to heat a stewpan full of lard to 150° or 200° F., and to then dip the meat into the hot lard for a few seconds.

Wire baskets used for deepfat frying serves this purpose well, although the housewife can use an ordinary collander or a meat fork for the purpose. When the meat has been thoroughly dipped in the lard from all angles, it should be cooled at room temperature, and then wrapped for locker storage.

"The film of lard keeps in the moisture effectively," Mr. Horney said, "and freezer burn, which is caused by the evaporation of moisture from the surface of the meat, and the formation of ice crystals, is completely eliminated. We have found that meat larded in this way, no matter what size, will remain fresh and eye-appealing, and will have none of the gray, pithy spots which freezer burn causes.

"It is particularly important to use this method with pork, which is more susceptible to freezer burn than beef, lamb, or other meats."

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BUSH EQUIPMENT

- 3—FW-40-8L Floor Mounted Unit Coolers complete with 3/4 HP, 220 volt, 3 phase, 60 cycle motor and magnetic starter and water defrost arrangement, front air discharge, less cowls, with low temperature F-12 Thermostatic Expansion Valve.
- 3—FW-60-8L Floor Mounted Unit Coolers complete with 1 HP, 220 volt, 3 phase, 60 cycle fan motor and magnetic starter and water defrost arrangement, front air discharge without cowls, suction outlet 15%" O.D. with low pressure F-12 Thermostatic Expansion Valve.
- 1—FW-90-6L Floor Mounted Unit Cooler complete with 1½ HP, 220 volt, 3 phase, 60 cycle fan motor and magnetic starter and water defrost arrangement, front air discharge without cowls, suction outlet 2½" O.D. with low temperature F-12 Thermostatic Expansion Valve.
- 1—LT-120—F-12 Ceiling Mounted Unit complete with water defrost spray and fan with 1/12 HP, 110 volt, 1 phase, 60 cycle motor, Thermostatic Expansion Valves and 3 way valves for water defrost.

McQUAY EQUIPMENT

- 2—164 Unit Coolers complete with F-12 Thermostatic Expansion Valve and fan motor for 110 H.P., 220 volt, 60 cycle, single phase current.
- 1—184 Unit Cooler complete with F-12 Thermostatic Expansion Valve less motor.
- 4—X-5 Zeropaks, complete with low temperature F-12 Thermostatic Expansion Valve, water defrost arrangement and ¾ HP, 220 volt, 3 phase, 60 cycle motor.
- 9—C-3A McQuay Unit Blower-Type Storage Room Coolers complete with ½ HP, 220 volt, 3 phase, 60 cycle fan motor and equipped with F-12 Standard Temperature Thermostatic Expansion Valve, right hand type unit.

For complete information and prices, contact

Mr. C. F. Cobourn, Purchasing Agent,

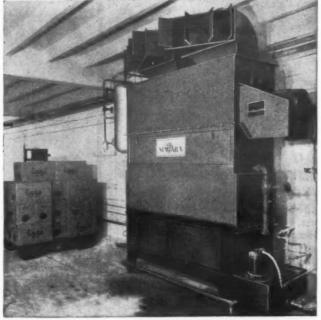
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This assures always full capacity for your plant...and does away with the capacity loss, the strain on your compressor and the waste of power that occurs during the period that frost is gradually accumulating in conventional systems.

Always operating normally and without overload, your equipment lasts longer and gives trouble-free service. You save power constantly, experience fewer operating difficulties and spend less for maintenance labor and material with Niagara "No-Frost" System.



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Ice Cream Frozen at 50° Below Zero by-



Refrigeration In this tunnel at the Hershey Creamery Company, Harrisburg,

Penna. Double conveyors, 120 feet long, handle the packages on two levels, automatically. Low-temperature air, blown from cooling coils overhead. freezes the product in less than an hour:

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Sunlit Plant of the Hershey Creamery Co.



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larged and now in its eleventh year of operation, this Frick-Freezer is supreme in its field. Consult the nearest Frick Engineer about that quickfreezer, to handle ANY product needed by your community or business.

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of Ice Creum on their way to the Freezing Tunnel





Editor's Note: Sometimes, if there is an adequate supply of steam available, the designer of a comfort cooling air conditioning system may decide upon a steam ejector setup to supply the required refrigeration.

Principles of such a system were described in last week's instalment, and here the author goes into detail on the actual calculations required for a typical steam ejector system producing 200 tons of refrigeration.

Refrigeration (Con't)

EXAMPLE

To produce 200 tons of refrigeration with a steam ejector system, assume entering water to the air conditioner is $40\,^{\circ}$ F. and leaving is 50° F. Steam is at 100 lbs. sq. in. gauge pressure, and condensing water enters the condenser at 80° F. and leaves at 95° F.

Estimate the amount of chilled water required at the air conditioner, the water make-up for the evaporator, amount of steam and condensing water required.

a. $200 \times 12,000 = 2,400,000$ B.t.u. per hour.

2,400,000

= 480 g.p.m. of 500 x 10°

chilled water required. b. The heat given up by the entering water to the evaporator is the difference between 50° and 40° or 10 B.t.u. per pound, which is flashed. The latent heat of steam at 40° F. is 1,071.3 B.t.u. per pound. 10 B.t.u.

= .93%Therefore, 1,071 B.t.u.

or 1% is the amount of flash vapor. The amount of water being circulated is 480 g.p.m. and if 1% is flashed, the flashing is 4.8 g.p.m. which is also the amount of water which must be made up.

The make-up water for the evaporator is 4.8 g.p.m.

c. To evaporate 1 lb. of water at

40° F. requires a heat input of 1,071 B.t.u.

The evaporation is 4.8 g.p.m.; reducing it to pounds is:

 4.8×8.3 lb. = 40 lbs. of water. Then 40 lb. x 1,071 B.t.u. = 42,840B.t.u. input from the steam per minute.

The input per hour is 42,840 x 60 = 2,570,400 B.t.u.

To find the B.t.u. available in steam when it expands in the ejector, it is necessary to figure for the available energy in expanding steam. With the aid of the steam and entropy tables, when expanding adiabatically from a higher to a lower pressure, the available energy is determined by the following formula:

 $AE = H - H_1 + T (N - N_1)$ where:

AE = Available energy per pound of steam in B.t.u.

= Total heat above 32° F. at higher pressure (absolute).

H₁ = Total heat above 32° F. at lower pressure (aboslute).

= Absolute temperature at lower pressure.

= Total entropy at lower pressure (absolute). Total entropy at higher

pressure (absolute). In this problem the above are:

= 1.189.6 B.t.u.

 $H_1 = 1,075.8 \text{ B.t.u.}$

COPPER PLUMBING certainly

makes small homes more salable!

 $T = 460^{\circ} + 40^{\circ} \text{ or } 500^{\circ}$ N = 2.1877 $N_1 = 1.5912$ Therefore: AE = 1.189.6 - 1075.8 + 500

 $\begin{array}{c} (2.1877 - 1.5912) \\ AE = 113.8 + 298.25 \end{array}$

AE = 412 B.t.u. per hour.

If 412 B.t.u. per pound of steam per hour is available, then the steam requirement per hour is:

2,570,400 B.t.u. input

412 B.t.u.

6,239 lb. of steam per hour. then.

6,239 lb.

200 tons

31.2 lb. steam per ton per hour.

d. The total condensing to be accomplished consists of the total steam requirements plus the water vapor which is carried over from the evaporator to the condenser.

The total amount of steam per hour is 6,239 lb., and the total heat of the steam is 1,189.6 B.t.u. per pound, so that the total B.t.u. to be condensed

6,239 lb. x 1,189.6 B.t.u. = 7,421,914 B.t.u. per hour. The water vapor B.t.u. is: $2,400 \text{ lb. } (100^{\circ} - 40^{\circ}) =$ 144,000 B.t.u. per hour.

Then the grand total to be con-

7,421,914 + 144,000 =7,565,914 B.t.u. per hour.

The condensing water enters at 80° F. and leaves at 95° F., which means a 15° differential, and therefore is capable of condensing 15 B.t.u. per pound of condensing water.

Per gallon: 15×8.3 lb. = 125 B.t.u. Then:

7,565,914 B.t.u.

125 B.t.u.

60,527 total gallons of condensing water required per hour. This becomes:

> 60,527 = 1,009 g.p.m.

60

and 1,009

= 5 gals. per ton per minute. 200

With these types of systems the following general statements can be made: 1. That the amount of water

evaporated is about 1% of the water circulated. 2. That the amount of water

evaporated per ton of refrigeration is about 11 lbs. per hour.

(12,000)

(1,071)

3. Each pound of water evaporated will cool about 12.8 gals. of water 10° F. in the evaporator per hour.

(1,071)

 $(8.3 \text{ lb. } \times 10^{\circ})$

4. The higher the operating steam pressure, the less total steam is required per hour per ton of refrigeration. For example, if the steam pressure is increased from 100 lb. to 200 lb., it results in about a 5% de-

crease in steam consumption, while if the steam pressure is lowered from 100 lb. to 10 lb., a 50% increase in steam consumption would occur.

Tinzman, Hayes Named McQuay Representatives

MINNEAPOLIS - O. J. Tinzman and R. W. Hayes have been appointed southern representatives for McQuay, Inc., here.

Mr. Tinzman's territory will include all of New Mexico, Louisiana, Mississippi, and most of Texas except the Panhandle.

Mr. Hayes will cover the Texas Panhandle, Oklahoma and Arkansas, southern counties of Kansas and Missouri, and a few counties in western Tennessee.

Ridout Succeeds Godley as EEI Rural Service Manager

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NEW YORK CITY - William J. Ridout, an agricultural engineer with the North Carolina Extension Service, has succeeded Roy W. Godley as rural service manager of the Edison Electric Institute, Charles E. Oakes, president, has announced.

In his new position, Mr. Ridout will supervise the farm electrification activities of the E.E.I. and will assist the various committees in the institute's farm section, Mr. Oakes said,

Mr. Godley, he added, has joined the Kroger Co. in Cincinnati in a public relations capacity.

Mr. Ridout has worked with the North Carolina Extension Service at Raleigh, N. C. since his release from the navy in 1945 as an extension agricultural engineer in charge of rural electrification.

Ricker Becomes Assistant To Jack & Heintz President

CLEVELAND - Albert A. Ricker, vice president in charge of finance, has been appointed to the newly created position of assistant to the president of Jack & Heintz Precision Industries, Inc., Byron C. Foy, president. has announced.

Mr. Ricker became vice president in charge of finance of Jack & Heintz in 1946, when the company was formed by the merger of Jack & Heintz, Inc., into Precision Products Corp. He will retain that position while fulfilling his new duties as assistant to the president.

Bowen Named to Dravo Post

PITTSBURGH-J. Carl Bowen has been named west coast sales and service manager for the Heating and Air Conditioning Section of the Industrial Department, Dravo Corp.

Mr. Bowen will be in charge of sales and service for Dravo Counterflo Heaters and Crane Cab Coolers, with headquarters in San Francisco. His territory includes Washington, Oregon, California, Arizona, Utah, Nevada, Idaho, and the western parts



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Valves for perfect operation. Both are available for prompt shipment.

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WEST NO

Standard Domestic Refrigeration Maintenance Agreement (YOUR COMPANY'S NAME)

Address City and State

Telephone Number

Full description of Equipment:

location of Equipment: THE COMPANY AGREES:

i. During the terms of this contract, when requested by the CUSTOMER, to make such mechanical adjustments and repairs to the refrigeration equipment (mechanical operating units only) only when caused by natural wear and tear and which in its judgment is necessary for the proper operation of the equipment and to furnish such parts as it deems necessary, provided such necessary parts are available and obtainable.

2. To report immediately any condition requiring correction and to grant free access to the location of all equipment to the COMPANY or its representatives, during regular business hours.

3. To hold the COMPANY harmless for any loss or damage to any person or to property no matter how caused, and for any negligence whatsoever, the COMPANY shall be obliged only to re-perform the service as agreed in paragraph 1.

4. That the above stated mechanical equipment is in good running condition as of the date of the inception of this agreement.

5. That (a) upon failure to any any installment of the date of the date of the property of the service of t

5. That (a) upon failure to pay any installment on or before the due date, or, (b) if at any time during the period hereof, service is performed to the equipment by anyone other than the COMPANY, or (o), the equipment is removed from the premise without the supervision or consent of the COMPANY, then, at the option of the COMPANY, this agreement shall become immediately

6. That upon its failure to make any of the installments as above specified on the due date, the entire balance will then become due and payable with interest and the CUSTOMER agrees to make such payments to the COMPANY or its successors or assigns on demand.

IT IS MUTUALLY AGREED:

7. That this agreement does not include: (a) repairs which may become necessary because of any cause not directly attributed to natural wear and tear; (b) refinishing or otherwise repairing damages to the exterior or interior of the cabinet and/or accessories or other equipment whether or not said equipment was sold to the CUSTOMER by the COMPANY; (c) the replacement or repair of hardware, ice-cube trays, defrosting pans or trays, grids, door gaskets, shelving, hinges, door handles and latches; (d), repairs necessitated because of an accident, abuse or neglect by the CUSTOMER, as an extra. The COMPANY shall not be responsible for delays in rendering service to the equipment described, due to or arising out of strikes, riots, lookouts, moving contingencies, transportation fires, accidents, acts of government, Acts of God, war, invasion, bombardment, or any other beyond its control.

That no warranties or guaranties expressed or implied are made by the COMPANY.

9. That no warranties or guaranties expressed or implied are made by the COMPANY.

10. The CUSTOMER shall accept the judgment of the COMPANY as final, as to the means and methods to be employed for any corrective work under consideration.

11. The COMPANY does not waive any of its rights hereunder by failure to insist upon a strict compliance with the terms of this agreement.

12. This contract contains the entire agreement between the parties and is to continue in force for a similar period unless terminated by either party by notice in writing sent by registered mail, thirty days prior to the expiration of any such term. The COMPANY may nevertheless cancel this agreement at any time by giving 30 days notice by registered mail to the CUSTOMER. This contract shall not be assignable without the written consent of the COMPANY.

(YOUR COMPANY'S NAME)

Accepted by

CUSTOMER

There have been some inquiries from NEWS readers about a standard maintenance agreement on domestic refrigeration equipment. The above agreement is one recommended by a refrigeration contractors' association in a large city.

Minneapolis-Honeywell Nets \$4,602,868 In 9 Months

MINNEAPOLIS - Minneapolis-Honeywell Regulator Co. has reported a net income of \$4,602,868 or \$3.48 per share for the first nine months of this year. The net for last year's nine-month period equalled

\$2.15 per share, the company said.

Net income for the third quarter of this year was \$1,300,525, or 97 cents per share compared to \$1,281,-529, or 98 cents for each share in

Need Gas?

"FILL IT AND FORGET IT"



Recharging with Virginia Methyl Chloride is a painless way to get rid of your refrigeration troubles. "V-Meth-L" is made specifically for refrigeration purposes . . . is consistently pure. The contents of each cylinder is tested and re-tested to maintain the high quality that has made "V-Meth-L" world-renowned. Remember, the use of a good refrigerant is the first step in preventing kick-backs due to sludging, copper plating, or frozen expansion valves. VIRGINIA

SMELTING COMPANY, West Norfolk, Va. Established 1898.

Distributors for Kinetic's "Freon" Refrigerants



BOSTON

DETROIT

Rehard Succeeds Mills **As Chief Safety Engineer** For City of Detroit

DETROIT-H. H. Mills, who retired Nov. 1 as chief safety engineer of the City of Detroit after 31 years of service, will be succeeded by John C. Rehard.

Mr. Mills, who was active in the preparation of municipal refrigeration codes here in 1929 and 1945, joined the Department of Buildings and Safety Engineering as a boiler inspector in 1916. He became the city's first chief safety engineer in 1921, and was an active member in the American Society of Mechanical Engineers.

His successor, Mr. Rehard, has been in the department since 1937, and is a member of the American Society of Refrigerating Engineers, National Association of Practical Refrigerating Engineers, the International Electrical Engineers Society, and the Engineering Society of Detroit.

Besides refrigeration and air conditioning installations, the department has jurisdiction over boilers, pressure vessels, inflammable liquid storage tanks, elevators, and oil and gas burners.

Central Appliance Service Started by Rudwall In Utica

UTICA, N. Y. - Specializing in commercial and domestic refrigerators, the Central Appliance Service has been opened at 503 Kossuth Ave. by John Rudwall.

W. J. Bagley Represents Marlo Coil In St. Louis Area

ST. LOUIS-W. J. (Bill) Bagley has been named to represent the Marlo Coil Co. in St. Louis and sur-

rounding territory, the company has announced.

Mr. Bagley, with more than 19 years service in the air conditioning and refrigeration industry, has been a midwestern representative for Superior Valve &

W. J. Bagley Fittings Co. More recently he has been an instructor for the David Ranken Jr. School of Mechanical Trades here.

Arrives at Work Early, Saves Plant from Fire

MIAMI, Fla.-The fact that Walter Coe, an employe, was early for work probably saved the plant of the Graves Refrigeration Co., 3807 N.E. Second Ave., from destruction by fire set by safe crackers.

The place was filled with smoke when Mr. Coe arrived. He found a trash basket, surrounded by inflammable material, afire in the office on the second floor.

He put out the flames and called police. Detectives said the doors of the safe had been taken off and the safe emptied of \$200 in cash.

They said they believed the burglars to have been professionals. The cracksman used a ladder to reach the second floor office.

Liquid Carbonic Changes Pacific Corp. to Division

CHICAGO-Formation of a Pacific Division to succeed the recently dissolved Liquid Carbonic Pacific Corp. has been announced by Liquid Carbonic Corp. here.

This move brings the west coast operations into the same pattern followed by the company in the rest of the country. Branches will be maintained in Los Angeles and Seattle, plus an office in San Francisco.

H. C. Mathey, who had been general manager of the Pacific Corp., has been appointed general manager of the new division with headquarters in Los Angeles. R. M. Moye is branch manager in Los Angeles while J. C. Fulton heads the Seattle branch.

Robert W. Mann as Pacific regional manager with headquarters in San Francisco has charge of fountain and ice cream cabinet sales and service, assisted by M. E. Berger as Southern California sales manager in Los Angeles.

The dissolved Pacific Corp. was organized in 1930 by W. A. Brown, Sr., then president of Liquid Carbonic, and J. A. Thomas, who served as president of the Pacific company until his retirement earlier this year.

In another announcement, W. D. Jordan, vice president of Liquid Carbonic, revealed the appointment of Joseph A. Galazzi as chief engineer of the company's Morrison, Ill.,

Mr. Galazzi had previously been plant manager of the Constant Temperature Division of American Instrument Co., and was associated with York Corp. for 11 years.



KOLD-HOLD "Quick Action" Serpentine Plates have a multitude of applications . . . all profitable to the user. Used to equip new installations, or to convert out-dated ones . . . used separately, in banks, plate stands, or as cabinet liners, they assure you the following advantages:

- 1. Easy installation.
- 2. Maximum prime surface.
- 3. Highest rate of plate heat acceptance.
- 4. No possibility of short circuiting the flow of refrigerant, which flows in one continuous pass from inlet to outlet.
- 5. Oil logging positively prevented.
- 6. Minimum pressure drop.
- 7. Tested under pressure.
- 8. An appreciably higher "K" factor.
- 9. Thoroughly cleaned and dehydrated.



Jobbers in Principal Cities



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Refrigeration Problems

And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

The Oil Cycle (3)

HALOGENATED HYDRO-CARBONS

Another group of fluids met the requirements to such a degree that within a few years after World War I, that is, in the early 20's, they enjoyed widespread popularity and use for many years. One or two of

them are still in very wide use.

These were the "halogenated hydrocarbons." They are based on the hydro-carbons in combination with one or more elements of a group known as "halogens." Of this group, three are the ones most commonly included in the "halogenated hydrocarbons.

These three are chlorine, fluorine, and bromine, and their symbols are Cl, F, and Br, respectively. When one or more of these is combined in varying proportions with carbon and hydrogen, compounds are formed, some of which are fluids that may have properties that make them acceptable as refrigerants.

One of these is methyl chloride, CH3Cl, whose molecule consists of one atom of carbon, three of hydrogen, and one of chlorine. Others are ethyl chloride, C2H5Cl; methylene

chloride dichlorethylene, (dielene) C₂H₂Cl₂; and trichlorethylene, (trilene) C2H Cl3.

These halogenated hydro-carbons had some definite advantages but, the non-miscible refrigerants, carbon dioxide, ammonia, and sulphur dioxide and the straight hydrocarbons, had some drawbacks.

1. They were miscible with oil in about the same manner and to approximately the same degree as the straight hydro-carbons.

They reacted less with water and formed less corrosive compounds than carbon dioxide, ammonia, and sulphur dioxide, but they did combine somewhat with water to form destructive acids to some extent, whereas the straight hydro-carbons did not. In this respect the halogenated hydro-carbon were more desirable than carbon dioxide, ammonia, and sulphur dioxide, but less desirable than the straight hydro-carbons, butane, propane, etc.

3. They had very little odor; as a rule, less than the straight hydrocarbons and, of course, not to be compared to ammonia or sulphur dioxide. This was a big advantage to anyone handling the refrigerant and to the user in case of a leak.

4. They were somewhat toxic;

most of them less than the straight hydro-carbons and far less than ammonia and sulphur dioxide. A person could breathe a good deal more of most of these gases without harm than the straight hydro-carbons or, of course ammonia or sulphur dioxide. This then was also an advantage over previous refrigerants.

On the other hand, like the straight hydro-carbons, the halogenated hydro-carbons can breathed in dangerous quantities without the person realizing it. To servicemen and others that handle these refrigerants and others who are awake and active there is little danger of being overcome.

Patients or inmates in institutions, movements are confined, people asleep in small rooms or apartments into which rather large amounts of some of these refrigerants may leak, can be made very sick or even asphyxiated. These refrigerants are, therefore, not suitable for use in large quantities in such applications.

5. These halogenated hydro-carbons were far less inflammable than the straight hydro-carbons, but in combination with just the right percentage of air, they will burn or even

This was an advantage over the straight hydro-carbons, which are quite flammable and explosive, is about the same as compared to ammonia which in certain percentages with air is also flammable and explosive, but is a disadvantage as compared to carbon dioxide and sulphur dioxide, both of which will neither burn nor explode nor will they support combustion but tend rather to smother out a fire.

Methyl chloride is the only one of this group that is still widely used. It is used in some household refrigerators but more commonly in small commercial type equipment such as water or beverage coolers, market fixtures, milk coolers, etc.

Ethyl chloride was used by several manufacturers in household refrigerators, water coolers, etc. It is rarely used at present.

Methylene chloride, also known as Carrene No. 1, was once widely used in household refrigerators and in large centrifugal type compressors for which this refrigerant was especially adapted. It is still used in considerable quantities, especially for replacement purposes.

These halogenated hydro-carbons, methyl chloride, methylene chloride, ethyl chloride, possessed real advantages, but they were not the ultimate. They were miscible with oil, their odor was not obnoxious nor overpowering, in fact it was hardly noticeable, but they did absorb quite a little moisture and thus formed some corrosive acids, mainly hydrochloric (also known as muriatic) that attacked finely machined parts such as valves and valve seats and seal surfaces. Moreover they were toxic-not badly, but enough to be dangerous under some conditions.

THE 'FREON' REFRIGERANTS

In the late 20's, two large companies, one chemical and the other refrigerating, got together to try to discover some new refrigerant that had all the advantages of the halogenated hydro-carbons, and none of their defects.

Again using the hydro-carbons as a base, the chemists were able to juggle the atoms around and produce a whole group of entirely new halogenated hydro-carbons suitable as refrigerants, and to these they gave the trade name "Freon."

They found that by displacing the hydrogen in the hydro-carbon and putting in its place either one or both of the two halogens, chlorine and fluorine, that they were able to produce a refrigerant that (1) was miscible with oil, (2) absorbed very little moisture and therefore formed

very little acid, (3) was odorless (4) was non-toxic and harmless to breathe, (5) would neither burn nor support combustion.

The first one of these to appear on the market was given the resounding and amazing name of dichlorodifluoromethane (but usually known by its number, "Freon-12" or "F-12"), whose chemical symbol is CCl2F2, so its molecule is composed of one atom of carbon, two of chlorine, and two of fluorine-and no hydrogen.

Another in the "Freon" group is "Freon-11, trichloromonofluoromethane, whose chemical symbol CClar proclaims its molecule to consist of one atom of carbon, three of chloride, and one of fluorine.

Other "Freons" are: "Freon-113," trichlorodifluoroethane, C2Cl3F3; "Freon-114," dichlorotetrafluoroethane, C2Cl2F4; "Freon-21," dichloro. monofluoromethane, CHCl2F; "Freon. 22," monochlorodifluoromethane, CHClF2.

It will be noted that the latter two still have one atom of hydrogen in their molecule, so they are slightly toxic and slightly flammable but for all practical purposes may be considered as "safe" refrigerants.

Although all these "Freons" are very much alike in their safety, lack of odor, reaction with water, and oil miscibility, they are quite unlike in their pressure temperature characteristics, specific weights, and heat content.

Thus it is possible for modern chemists to build up a refrigerant for almost any application depending on the temperature, pressure, type of compressor, etc.

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There is no "universal" refrigerant one that is perfectly suitable for high or low temperatures; for any type compressor or evaporator; for large or small systems. A refrigerant must be selected for a given use or type of equipment.

ALL MODERN REFRIGERANTS ARE OIL-MISCIBLE

The reason for tracing through the "evolution" of refrigerants is to bring out clearly that the modern trend in refrigerants is not only toward greater safety, even though it may be at the expense of some reduction in efficiency, but also to bring out that the modern refrigerants are miscible with oil; that this is not only desirable (although with some refrigerants we get somewhat greater miscibility than we like) but that it naturally accompanies the hydro-carbons on which modern refrigerants are based.



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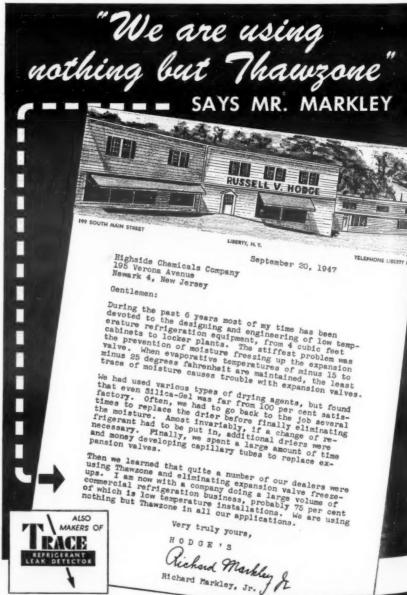
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Problems Get Attention at Open Disscussion



At the NARC meeting in the Hotel Stevens, Chicago, left to right: Nathan Edelstein, recording secretary, New York City; Warren W. Farr, president, Cleveland; Gerald W. Weston, executive vice president, Cleveland.



From left to right: Ed S. Wright, first vice president, Youngstown, Ohio; F. J. Zoppel, director, Columbus, Ohio; Ralph W. Lampie, director, Richmond, Va.; Charles Harris, Boston; R. D. Elgin, Little Rock, Ark.; L. C. Anderson, sergeant-at-arms, Chicago; William G. Euth, director, Detroit.

NARC Takes Up Parts, Contract Issues--

(Concluded from Page 1, Column 2) is a tendency to lump heating, plumbing, and air conditioning in one section. Some of the old established heating and piping firms are getting into air conditioning, while some air conditioning contractors are going into the heating and plumbing business as a result.

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Some air conditioning contractors lose out entirely where architects' specifications lump these three jobs together, and, he added, the bids on the various portions of the job vary widely.

It was generally agreed that the problem could be greatly alleviated if the specifications were separated. Another contractor present also pointed out that this problem may become increasingly important when the heat pump gains more widespread use and acceptance in the field of

Also discussed at some length during Sunday's session was the subject of "trade relations," particularly the relations of the contractors' group with manufacturers. Special emphasis was placed on problem of requesting better final inspection by the producers of various components employed in installing a job.

Many companies, it was said, operate on the principle of expecting a certain percentage of defective parts to go out. But the general practice of manufacturers' replacing defective parts (within the warranty period) does not take into consideration the cost to the contractor of the labor

involved in replacing the part nor other costs, such as replacement of refrigerant which may have been lost when the part failed, it was stated.

The problem has been taken up with manufacturers and is receiving favorable response, the contractors were told by their president, Warren W. Farr.

In this connection he also advised contractors to investigate thoroughly the possibility of carrying products insurance.

The problem of warranties was also brought up at the meetings, and it was agreed that NARC should examine the possibility of suggesting a uniform policy for extending to the consumer the manufacturer's warranty supplemented by the warranty of the contractor.

A guarantee, incidentally, is not "insurance," the group was informed by Nathan Edelstein. It simply guarantees the repair of equipment but does not insure 100% operation of the equipment, he said.

Among the other matters discussed, it was proposed that a study of franchises be undertaken.

President Farr also reported the General Contractors Association (of which NARC is a member) is now starting a drive to return to the fixed price basis of contracts and has asked that refrigeration contractors

The suggestion to abandon the time-and-material basis is an effort, he said, to reduce construction prices. In connection with another NARC

Higher Retail Prices, **Lower Profits Seen**

BOSTON-Prospects are not very bright for lower retail prices, two speakers at the Boston Conference on Distribution indicated here last week.

P. A. O'Connell, president of E. T. Slatterry Co., local specialty store and general chairman of the conference, forecast that retailers' dollar volume will probably be about the same this year as last year, though fewer units will be sold because of inflated prices.

Retailer profits per dollar are being pinched by increased and increasing expenses on one hand and the fact that consumer resistance to high prices compels them to absorb some of the advances on the other.

Jack I. Straus, president of R. H. Macy & Co., pointed out three obstacles to the lowering of retail prices. They are:

1. Shortages of raw materials that prevent both retailer and manufacturer from reaching quantity goals. 2. An unjustified pyramiding of

profits from manufacturer to retailer that could not be maintained if the supplies of goods were adequate.

Weakened competition at the retail level caused by price fixing laws and price maintenance by manufacturers.

Mr. O'Connell also told the conference that the day of large inventories in the retail field were past. "Distributors have come to the conclusion that profits are made on rapid turnovers and lost on hangovers," he asserted.

As a case in point, he noted that department store inventories in August equalled 26 months' sales as compared with 37 months last February, and 32 months for the 1935-39 average.

Ansco To Air Condition Plant

BINGHAMTON, N. Y.-Work has begun on a \$2,000,000 Ansco film plant here which will include an elaborate air conditioning system. The system is necessary for rigid control of temperature and humidity during film manufacturing operations. The new plant is scheduled as the first of a series of similar plants for the Ansco company.

activity-that of attempting to persuade dairies to give up the practice of selling refrigeration equipment to stores, Mr. Farr reported that the big dairies say they want to go out of the cabinet sales business but wonder if the small dairies will go along.

At the board of directors meeting on Monday, the application for membership of the Sacramento contractors group was approved.

A new decal for members was also approved. Measuring approximately 8 by 10 in., one decal will be supplied to each member. These are expected to be available in a month.

Appointment of Charles Harris, with Ted Reina as substitute, as NARC representative on the task committee which is revising the American Standards Association B9 refrigeration standards was also announced.

G-E Pension To Replace Profit-Sharing Plan

NEW YORK CITY-Inauguration of a new employe pension plan that will cost the company an initial \$40,000,000 and an annual investment, at the present rate of employment and pay, of about \$16,000,000, has been announced by the General Electric Co. here.

The pension will replace the company's 13-year-old profit sharing plan which will end after the 1947 profits have been figured, a company statement said.

Any benefits lost to the employes through the abolition of the profit sharing plan will be more than compensated for "from the standpoint of regularity and total returns," it added.

Under the profit sharing plan, General Electric's 160,000 employes have received about \$3,000,000 in each of the past four years, the company asserted.

General Electric officials explained that they decided to abandon this plan because it had been unsatisfactory as an incentive and in its other results for some time.

Radically changed conditions caused by the company's expansion and the rapid growth in number of new employes were blamed.

Besides, they noted, they had told union representatives last April that if higher wage rates were granted, the profit sharing plan would have to be discontinued. The union took the 15-cent per hour general wage

The United Electrical, Radio, and Machine Workers, CIO, representing General Electric workers, protested this decision and noted that no such change was taking place in the extra compensation for executives.

Company officials countered by stating that the extra compensation plan offered executives a real incentive to boost the firm's prosperity.

Gordon Armstrong Co. Appliance Div. To Manufacture Washers

CLEVELAND - Incorporation of The Gordon Armstrong Co., and establishment of an appliance division within the firm has been announced by Gordon Armstrong, president and treasurer.

Eve Armstrong is vice president and secretary of The Gordon Armstrong Co., Inc. No stock distribution has been made. Mr. Armstrong said.

First appliances to be merchandised by the new division are a dishwasher and a clothes washer, he added. The firm also sells unit ventilators for commercial buildings and industrial plants.



on Valves, Flanges &

FOR MORE SALES! The new Sherer open-type self service display refrigerator, for Meat and Dairy Products, is meeting the expectations of America's most discriminating food merchants. It will pay you to know PARIGERATED MERCHANDISERS BY more about it!

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Instead of the ice which clings on tight without THORS and has to be pounded off at the risk of real damageafter a coating of THORS the ice that accumulates comes off easily. Just a light tap and it falls off with no damage to valve or stem! THORS also acts as a lubricant between valve stem and packing and it tends to protect the valve stem against corrosion.

When THORS is used on flanges, it permits flange nuts to be tightened up easily and quickly, preventing leakage of the refrigerant. Flanges should be coated with THORS so that the ice can be gently and easily tapped off the flange whenever the nuts are to be tightened.

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PATENTS

Week of Aug. 26 (Continued)

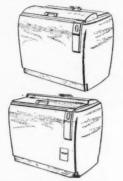
DESIGNS

147,369. DESIGN FOR A COOLER.
Raymond Loewy, New York, N. Y.; assignor to The Coca-Cola Co., Wilmington, Del., a corporation of Delaware. Application Dec. 21, 1945, Serial No. 124,915. Term of patent 14 years. (Cl. D67-4.)



The ornamental design for a cooler, as

DESIGN FOR A COOLER 147,370. CABINET. Baymond Loewy, New York, N. Y., assignor to Goca-Cola Co., Wilmington, Del., a corporation of Delaware. Application Dec. 21, 1945, Serial No. 124, 1917. Term of patent 14 years. (Cl.



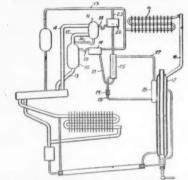
The ornamental design for a cooler

AVAILABLE FOR LICENSING OR SALE

Pat. 2,124,289. AIR CONDITIONING. Patented July 19, 1938. Portable air con-ditioning unit enclosed in a casing is provided with a compressor which is driven by both an electric motor and an air motor. Air from the compressor is disby both an electric motor and an air motor. Air from the compressor is discharged into a tank where it is washed and cooled while following a tortuous path through the tank. The washed cool air is then conducted to an air motor where it expands and drives the motor. Air leaving the motor is conducted to a separator tank for removal of entrained moisture prior to being mixed with untreated air for delivery into a room (Owner) Richard Erickson, 1253 West Diversey Pkwy., Chicago 14, Ill. Group 35—84. Reg. No. 8,109.

Week of September 2

2,426,811. DISTRIBUTING LIQUID RE-FRIGERANT IN ABSORPTION REFRIG-



ERATION SYSTEMS. Sigurd M. Backstrom and Peter M. Kohler, Stockholm,

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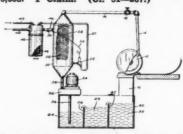
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Sweden, assignors to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden. Application Peb. 26, 1942, Serial No. 432,474. In Sweden, Peb. 26, 1941. 18 Claims. (Cl. 62-5.)

2. A diffusion type refrigeration system having a gas circuit including a plurality of experted as source of liquid refrigerations.

of evaporators, a source of liquid refrig-erant, and means utilizing heat produced within the system to cause division of liquid from said source against the action of gravity for distribution to said evaporators.

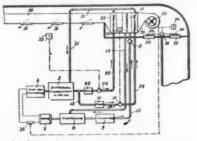
2,426,817. COOLING SYSTEM FOR MACHINE TOOLS. Charles F. Charlton and Mark A. Palmer, Jr., Manchester, Conn. Application Jan. 19, 1945, Serial No. 573,608. 1 Claim. (Cl. 51—267.)



A method of producing work to close tolerances in a machine tool by maintaining a predetermined constant temperature in the workpiece during working operations thereon, which consists in conducting spent cooling liquid from the work to a separating chamber, separating the detritus solids from the liquid in the separating chamber, conducting the separated liquid through a refrigerating device maintained at a constant and definite temperature thereby cooling the separated liquid to a predetermined tem-perature, and discharging said liquid at said predetermined temperature onto the

2,426,827. REFRIGERATION APPARATUS. Harold Hemming, Dedham, and Charles R. Keep, Norwood, Mass., assignors, by mesne assignments, to Westinghouse Electric Corp., a corporation of Pennsylvania. Application Sept. 21, 1943, Serial No. 503,216. 4 Claims. (Cl. 257—3.)
2. In a refrigeration system having an air cooling evaporator, a fan for moving air through said evaporator and into the space served thereby, a continuously operated compressor for supplying refrigerant 2,426,827. REFRIGERATION APPARA

ated compressor for supplying refrigerant to said evaporator, a liquid cooled internal combustion engine for supplying energy for driving said compressor, the combina-tion of a preheater located upstream with respect to air flow of said evaporator, a reheater located down-stream with respect



to air flow of said evaporator, means for to air flow of said evaporator, means for supplying cooling liquid from said engine to said preheater and said reheater, means including means responsive to the temperature of the air between said evaporator and reheater for varying the volume of liquid from said engine to said preheater, and means including means responsive to the temperature of the air delivered into said space for varying the volume of liquid from said engine to said reheater.

2.426.920. METHOD OF FORMING AND 2,426,920. METHOD OF PORMING AND APPLYING COOLING PINS TO TUBU-LAR MEMBERS. Wilhelm B. Bronander, Montclair, N. J. Original application Aug. 20, 1942, Serial No. 455,451, now Patent No. 2,363,224, dated Nov. 21, 1944. Divided and this application Nov. 18, 1944, Serial No. 564,084. 3 Claims. (Cl. 29—157.3.)

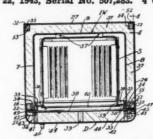


1. The method of providing a member with radiating fins which consists of forming a groove in the member, forming walled in unit with substantially parallel spaced walls connected at one edge of each wall by a bridge of compressible material integral with the walls and ex-tending toward the free edges of said

walls, inserting under said connecting bridge and between the connected edges of the walls a wire of deformable, com-pressible material, inserting the double walled fins and wire in the groove with the wire at the bottom of the groove, and forcing the fin walls laterally by pressure against the outer portion of said pressure against the outer portion of said bridge, said pressure upsetting and ex-panding the deformable wire insert laterally against fin walls thus compress-ing the bridge and the wire and anchor-ing the fin unit in the groove.

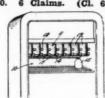
Week of September 9

2,427,048. SPACED WALL HEAT IN-SULATED REFRIGERATOR CABINET. John H. Ganzer, Duluth, Minn., assignor to The Coolerator Co., Duluth, Minn., a corporation of Minnesota. Application Oct. 22, 1943, Serial No. 507,283. 4 Claims.



1. A refrigerator cabinet including an mer wall structure including side walls defining a compartment having an open front side, a frame structure including upright front and back pairs of posts and connecting rails surrounding said inner wall structure each having a groove in their outwardly disposed faces, top, bot-tom, back and side wall portions arranged with their margins laid against the said outside faces of related posts and rails to define an outer wall structure having a corresponding open front side, a strip of resiliently compressible sealing mate-rial contained in each groove having sur-face contact with such outer wall margins overlying the grooves to prevent air seepage between the margins and related seepage between the margins and related posts and rails into and out of the areas between the inner and outer wall structures, a filler strip joined to the inside opposed faces of each of the front posts in overlapping relation with the free front edges of the side walls of the inner wall structured to write in the hold of the side walls. edges of the side walls of the inner wall structure, a mortise in the back face of each strip to receive the front edge margins of the said inner side walls, the front faces of the front posts and the joined filler strips being recessed at the joint between said parts, a strip of resilient sealing material in said recesses, and a facing strip laid against the front face of each front post and its joined filler strip, said sealing strips preventing filler strip, said sealing strips preventing air seepage into the space between the inner and outer wall structures past the joints between the front posts and their joined filler strips.

2,427,200. SELF-DRAINING HEAT TRANSFER FINS. Victor G. Dreier, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Dela-ware. Application June 29, 1944, Serial No. 542,780. 6 Claims. (Cl. 62—103.)



1. A self-draining heat transfer fin com-prising a relatively flat sheet metal mem-ber formed with an integral drain trough directly under one edge thereof for col-lecting moisture that may drip from either side thereof, and said fin having elongated slots to provide openings be-tween said one edge and said drain trough which substantially eliminate heat transfer between the heat transfer surfaces of the fin and the drain trough.

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Leading well-established domestic heating manufacturer planning to enter air-conditioning manufacture is in need Sales Manager to organize and direct aggressive sales organization. Write, giving full experience. Box No. 2553, Air Conditioning & Refrigeration News

AVAILABLE FOR SALE

2,235,125 Refrigeration Means & Method, Patented March 18, 1941.

Pat. 2,340.780 Refrigeration Apparatus, Patented Feb. 1, 1944.

The two patents listed above maintain two temperature zones in one refrigerator, non-freezing compartment and quick freezing compartment. Temperature and humidity of one compartment unaffected by the other. Heavy insulation pre-vents temperature of compartments from affect-ing each other. Humidifying grids are provided below and above non-frosting coil maintaining proper humidity in compartment. (Owner) Mrs. Gertrude S. Torbensen, 1932 East 116th St., Cleveland 6, Ohio. Inventor, Viggo V. Torbensen

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LABORATORY TEST & project engineers. Openings for several refrigeration labora-tory test & project engineers interested in a permanent position with a well established refrigerator manufacturer. Me-chanical or electrical engineering gradu-ates preferred. Experience not necessary. Give education, experience, references. Address replies to BOX 2528, Air Condi-tioning & Refrigeration News.

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Must know butcher tool line and supplies man proven record need apply firm centrally located. Must have sales ability, train salesmen, assume full responsibilities. Give qualifications and reference. One of best paying positions in industry. BOX 2533 Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVE to head-quarter Detroit and travel entire country quarter Detroit and travel entire country promoting commercial refrigeration sales through dealer contacts and regional meetings. Nationally advertised line includes domestic home freezers. Excellent earning possibilities. Experience in specialty selling and/or refrigeration essential. Reply with brief particulars for further negotiation to BOX 2534 Air Conditioning & Refrigeration News. ditioning & Refrigeration News.

DESIGN AND development engineer DESIGN AND development engineer wanted by prominent manufacturer of valves and flow control devices. Supervisory position open for man with administrative ability. Engineering education necessary, with experience in refrigeration field highly desirable. Located in Midwest. Write full details, including experience education, salary expected. experience, education, salary expected. BOX 2539 Air Conditioning & Refrigera-

SERVICE MANAGER for aggressive sales and service company located Northern Ohio. Service department personnel 20 people. Permanent position with unlimited possibilities. Requires a manager well-qualified to supply mechanical information and organize office and service procedures. State previous experience, salary requirements, first letter. BOX 2547 Conditioning & Refrigeration News.

EXPERIENCED DRAFTSMAN wanted to lay out and detail refrigerators, display cases, etc. old established Indiana etc. old established Indiana com-Pleasant working and living con-in small town near city. Write ditions in small town near city. application giving experience, employment record, age, family. BOX 2549 Air Condi-tioning & Refrigeration News.

EQUIPMENT FOR SALE

CHRYSLER—SEALED radial compressors Sacrifice. Name your price. Immediate delivery. 3 & 5 HP. AC machines 50 & 60 cycle. 220 volt. ABCO AIR CONDITION-ING CO., 689 Tenth Avenue, New York City, Cl. 6-9460 or FREEZAIRE CORP., 145 Washington Street, Brooklyn, N. Y. C.,

MOTORS AND condensing units—available at once—1/8-1/4-1/2 Universal condensing units with or without motors. Special—six hole ice-cream cabinets with ¼ hp. Copeland units less motors \$225. Also beverage coolers, beer equipment, stainless steel reach-in freezers. ALBROD CORP., 319 West 48th St., New York City 19, CI 6-9100.

LIQUIDATING \$70,000 stock of 22-32-40-60-80 cu. ft. reachins, remote and self-contain models; all sizes of condensing units, electric water coolers, freezer plates electric meat slicers, meat choppers. At less than factory prices. A real oppor-tunity. Write AMERICAN COMMERCIAL ECUIPMENT CO., 4150 Holly Knoll, Los Angeles 27, California. Normandy 0450.

FOR IMMEDIATE disposal—large quantities of compressors. 1% stroke, 1% bore, suitable for ½ and ½ horse power condensing units. For complete information regarding price and delivery—C. C. CAWTHORNE & COMPANY, INC., 1100 Morris Avenue, Union, New Jersey.

SELLING OUT: used (as is) and rebuilt Frigidaire and Kelvinator condensing units with new s. ph. capacitor motors. Write for list. EDISON COOLING CORP., 310 E. 149th Street, Bronx 51, N. Y.

FOR IMMEDIATE disposal our inventory new Universal compressors complete with motors, 3, 5, 10 HP water cooled—original crates. Water defrost coils Drayer-Hanson 1900 WD - 2600 WD also Recold 1344LT. Sacrifice—Write LOCKER ENGINEERING COMPANY, 521 No. La Cienega Blvd., Los Angeles 36, California.

WALK-IN COOLERS, sectional. Kilndried fir throughout. 4 in. fibre glass, natural finish, \$.95 per sq. ft. Beer coolers, \$.85 per sq. ft. Cooler and freezer doors as low as \$36.50. No extra charge for special sizes. Florist boxes. Wholesale only. MIDWEST MANUFACTURING CO., 101 Glenwood, Minneapolis 2, Minn.

MOTORS FOR sale, from stock, Jack & Heintz, others at list; discount on quantity purchases. Special prices on scheduled deliveries. Fractionals and integrals, AC and DC. Send in your specific inquiries. MODERN SUPPLY COMPANY, 206 Fulton Street, New York 7, N. Y. CO. 7-0100.

½ HP F. C. Crew condensing units, new, in crates, with G. E. motors, sacrifice, \$89.00 each. PERFECTION BAR COR. PORATION, 1640 East 65th Street, Cleve. land, Ohio.

SACRIFICING BRAND new Copeland and other top brands. Condensing units in original crates. ½, ¼, ½, ½ HP aircooled. 1½ and 3 HP water-cooled. All priced for immediate clearance. Write or wire now. ROCHELLE REFRICERA. wire now. ROCHELLE REFRIGERA-TION COMPANY, 31 East 4th Street, New York 3, N. Y.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley F-12 units. Set of three \$5.25 (Part No. 1020). Installation tool 20¢. Immediate delivery.
Money-back guarantee. SEALED UNIT
PARTS CO.. 3097 Third Ave.. New York,

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FOR IMMEDIATE disposal-surplus material as follows: 633# soft copper strip, .078 x 1½". 2200# hard copper strip. .010 x 1%". 2000# hard copper tubing. .375 x 1%". 2000# hard copper tubing. 375 OD x .315 ID. 620# soft copper tubing, .375 OD x .315 ID. For complete informa-tion regarding prices and delivery—P.O. BOX 497, Elizabeth, New Jersey.

REDUCING INVENTORY of Frigidmist REDUCING INVENTORY of Frigianist Vegetable Cases. All new in original crating. Less than distributor cost. Write for price list. BOX 2540 Air Con-ditioning & Refrigeration News.

LIQUIDATING STOCK of new nationally manufactured condensing units at below manufactured condensing units at below distributors cost. Quarters, thirds, halves, fives, seven and ½s. 5 Kold Hold plates 12" x 108", \$15.00 each. 4 Kold Hold plates 22" x 48", \$12.50 each. New Peerless 5 ton low temperature coils \$250.00 cost \$350.00, BOX 2551, Air Conditioning & Refrigeration News

CLOSING OUT: large stock of flare fittings (all types and sizes). V-belts, motor pulleys and fans, magnetic starters. compressor valves, shut-off valves (%", 7%", 13%"), controls, receivers, etc. All material brand new and of standard make. Write us your requirements. BOX 2552, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

FOR SALE: Established air conditioning refrigeration and engineering business. Have National franchise for this and another state for refrigeration. Stock about \$60,000. More than \$300,000 yearly about \$60,000. More than \$300,000 yeary profit over \$50,000—1946. Building available reasonable rental or purchase. Retiring. Would sell invoice price. Would take approximately \$40,000. LESLIE CONNER, Hightower Building, Oklahoma City, Oklahoma.

SCHOOLS

NEW FULL or part time classes in ad-NEW FULL or part time classes in advanced refrigeration, air conditioning, and heating to start December 2nd. Enroll now. G. I. approved. Men with high school education or experience or basic training in refrigeration, air conditioning, or heating preferred. DETROIT AIR CONDITIONING INSTITUTE, 4125 Grand River Avenue, Detroit 8, Michigan.

Factory Representatives WANTED

Experienced factory sales representatives to estab lish dealers and distributors for one of the lead-ing Eastern commercial refrigeration plants. manufacturing frozen food display cabinets, dairy cases, ice cream cabinets, etc.

Extensive national advertising program, leads and liberal commissions. Protected exclusive terri-Men with experience in eration line and accustomed to earnings of \$7500 upwards reply stating experience. Correspondence confidential. Our men know of this ad.

Box 2545. Air Conditioning & Refrigeration News

Large Eastern manufacturer specializing in commercial refrigeration has open time to build under private label for rated firm in the dairy, candy, ice cream, or food lines. Cabinet will be built to rigid specifications.

Box 2546, Air Conditioning & Refrigeration News

CRACKER-JACK Manufacturers' Representative

Presently representing one manufacturer, call on represent one additional.

Have over one hundred active accounts, including ice cream manufacturers, soda fountain manufacturers, distributors, and dealers. Also hotel and restaurant equipment manufacturers and dealers, beer distributors, commercial refrigeration dealers, carbonator sales and rental outlets, et cetera.

If you have an outstanding product, and want this type of distribution throughout the whole cast coast. I will act as your exclusive regre-sentative on a commission basis.

Write to Box No. 2550 Air Conditioning & Refrigeration News

2020 CANAD

Factory Sales Representatives



H. R. COKELEY Covers West Virginia



J. W. CARLSON Covers northern N. J.



R. L. STEPHENS Covers Indiana

J. W. Carlson, H. R. Cokeley, R. L. Stephens Assume Wilson Posts In 3 States

SMYRNA, Del.—Three new factory sales representatives to cover the Indiana, West Virginia, and northern New Jersey areas for Wilson Refrigeration, Inc., have been announced here by A. A. Davis, vice president and general sales manager. Wilson Refrigeration, Inc., is a division of the Wilson Cabinet Co., manufacturer of farm and home freezers, milk coolers, and commercial refrigeration products.

The appointees and their assignments are: Roy L. Stephens, of Ward, Pa.-Indiana; Harlan R. Cokeley, of Morgantown, W. V.-West Virginia; and John W. Carlson, Glen Ridge, N. J.-northern New Jersey.

Mr. Stephens had been sales engineer for the Detroit Lubricator Co. since 1935. From 1930-35 he was refrigeration and maintenance engineer for the A. & P. Tea Co., Philadelphia. He also served as assistant service engineer for Delco Light Co., and Frigidaire Corp., Washington, D. C., from 1924-30.

Mr. Cokeley, a former educator, for seven years was a county agent for Monongalia County, W. Va., and had 11 years of service in the U.S. Department of Agriculture.

Mr. Carlson was formerly with Philip H. Harrison, General Electric distributor for New Jersey. After his discharge from the U.S. Navy, he was connected with Kelmore Refrigeration Service, Inc., one of the largest organizations of its kind in New Jersey, serving in the commercial sales department.

Wilson Freezer Campaign Stresses 'Harvest' Angle

SMYRNA, Del. - The "Golden Freezer Harvest" campaign, the first phase of a national effort to stimulate distributor, dealer, and consumer interest in home and farm

freezers, and to increase sales, was launched here following a two-day sales and planning conference of executives and factory representatives of the Wilson Refrigeration, Inc., here.

The Wilson factory representatives from various sections of the United States reviewed plans for the opening of the Wilson educational and sales program for freezers at sessions held in the American Legion Hall here. John E. Wilson, Jr., president of Wilson Refrigeration, Inc., discussed "Products and Markets" and A. A. Davis, vice president and general sales manager, presiding at the symposiums and clinics, reported on future sales plans and policies for the company.

Charles E. Mougey, advertising and sales promotion manager, told the factory representatives that the 'Golden Freezer Harvest" project will employ direct mail, advertising, publicity, and other promotional aids to gain the interest of distributors, dealers, and consumers.

The campaign, with the fall harvest as a timely background, will serve as the opening gun of the Wilson educational and sales effort. It will stress the opportunity at harvest time for the housewife to combat rising food prices by using a home freezer in storing larger quantities of fruits and vegetables that can be bought now during the top season at lower prices. Zero-safe home freezers will be stressed in the current program.

One of the main subjects on the agenda was a clinic discussion of a home freezer sales presentation being developed to tell a complete and concise story on food freezing, and one that can be carried quickly and effectively by dealers to the con-

Other subjects on the program were: "Freezer Facts and Figures," by Mr. Davis; "New Products and Design Changes," by Raymond Pusey, chief engineer, and "Field Services" by R. C. Price, sales engineer.

J. R. Porteous of the Commercial Credit Corp. spoke on "Wholesale and Retail Financing," while R. J. Brittingham, Phoenix Insurance Co., discussed insurance problems.

Over Handling of Firm's Line In New York Area

NEW YORK CITY-Distribution of Admiral Corp. refrigerators, radios, and ranges in the New York City area is now being carried on by Admiral Corp. New York Distributing Division, a factory branch, taking over from Dale Distributing

This was jointly announced by Ross D. Siragusa, Admiral's president, and Maurice S. Despres, president of Dale Distributing Co., Inc. and a director of Admiral Corp.

wholly-owned sub-Dale's two sidiaries: Dale-New Jersey, Inc. and Dale-Connecticut, Inc., will continue to act as the exclusive distributors of Admiral products in their respective territories. Dale Distributing Co., New York, as heretofore, will act as distributor of the many nationallyadvertised lines which it now handles, none of which compete with Admiral.

The new Admiral distributing branch will be known as Admiral Corp. New York Distributing Division and will, for the present, share quarters with the Dale organization at 40 East 32nd St., New York City.

The new company is taking over that portion of Dale's sales force, which heretofore specialized in the sale of Admiral products. The sales department of the new Admiral organization will be in charge of E. Robert Glauber assisted by Martin

Robert Howard, formerly sales manager of Dale's New York operation, will become general manager of Dale-New Jersey, Inc.

New Admiral Div. Takes G.W. Wilson Sets Up As Mfr.'s Representative

CHICAGO-George W. Wilson has resigned his post with the Henry Valve Co. to establish his own busi-

ness as a manucently.

facturers' representative, it was announced here re-

Mr. Wilson, who has had charge of jobber sales at Henry for the past four years, plans to handle only products sold through heating and refrigeration wholesalers.

He said that he will travel the "Chicagoland" territory, including northern Illinois, eastern Iowa, Wisconsin, and a portion of Indiana.

Prior to his connection with Henry, he was associated with Revere Copper & Brass Co. for 12 years in a sales capacity.

Bendix 9-Month Report Shows Net Profit of \$7,127,044

SOUTH BEND, Ind.—Bendix Home Appliances, Inc., for the three months ended Sept. 30 reported net profits of \$2,115,089, after all charges including provision for federal income taxes.

For the nine months ended Sept. 30, Bendix Home Appliances, Inc., reported net profit, after all charges, of \$7,127,044, equal to \$6.81 a share. Net sales for the three months were \$21,253,000 and for the nine months, \$59,707,000.

GRUNOW AUTHORIZED DEALERS ARE MAKING MONEY!

Build up your new box sales now with Grunow Service Business!

Write for Authorized Service in your territory.

GRUNOW AUTHORIZED SERVICE, INC. 4313 W. Fullerton Ave., Chicago 39, III.

REFRIGERATION, INC

- FARM AND HOME FREEZERS REACH-IN REFRIGERATORS
- WALK-IN REFRIGERATORS
- FARM MILK COOLERS DIVISION OF WILSON CABINET CO., INC. SMYRNA, DELAWARE









One of a series of messages to help you increase your understanding of business paper advertising, and its effect on your business.

Why you and your advertising manager are partners

FROM WHERE YOU SIT, advertising may look like $oldsymbol{\Gamma}$ the "glamour department" of your company necessary, of course, but pretty far removed from the hard-headed realities of the production line.

But take a closer look. In one respect, the advertising manager's job bears a striking resemblance to

You're production-minded. You're concerned with anything that will improve plant procedures, speed up assembly time, prevent waste, and reduce the manufacturing cost per unit.

And that is precisely where you walk arm-in-arm with your advertising manager. Because he thinks the same way about the manufacture of a sale.

The whole process of selling and distribution are his assembly line. And every time he can reduce the unit cost of a sale by so much as a few cents, he increases your company's chance to show a profit.

Ask him for a definition of advertising, and he will probably tell you that it is simply mechanized selling, a machine that multiplies the productive capacity of the sales force — seeking out prospects, arousing their interest, creating a preference for the things your company makes.

And when it is concentrated among the handpicked readers of business papers, advertising becomes the most efficient machine this partner of yours has found for lowering the cost of producing a sale.

What are the ten ways to measure the results of your business paper advertising? You'll find the answers in a recent ABP folder, which we'll be glad to send you on request. Also, if you'd like reprints of this advertisement (or the entire series) to show to others in your organization, you may have them for the asking.

BAKER

BRUNNER KELVINATOR MILLS CARRIER COPELAND PAR **UNIVERSAL COOLER CURTIS** WESTINGHOUSE FRIGIDAIRE YORK and other commercial compressors

FOR COMMERCIAL AND

SEMI-COMMERCIAL

COMPRESSORS

UNIT No. 14222

Available for over 848 models as shown on our stock list and carried by all leading jobbers.



GENERAL ELECTRIC

2020 NORTH LARRABEE ST. . CHICAGO, 14, ILLINOIS, U.S. A CANADIAN AGENT: 2025 ADDINGTON AVENUE • MONTREAL, 28, QUEBEC, CANADA

Sealing with Certainty with

ROTARY 5

REPLACEMENT



AIR CONDITIONING & REFRIGERATION NEWS

is one of the 129 members of The Associated Business Papers. whose chief purpose is to maintain the highest standards of editorial belpfulness-for the benefit of reader and advertiser alike.

Three Who Take New Executive Posts In the Industry



FRANK KOHNSTAMM

He has been named sales manager for the refrigeration products manufacturers by Jack & Heintz Precision Industries, Inc.

Kohnstamm to Jahco - -

(Concluded from Page 1, Column 2) Division, in which capacity he directed the division's product development, product planning, sales coordination, advertising, and sales promotion activities.

In 1934 Mr. Kohnstamm was placed in full charge of the Westinghouse Lighting Division in Cleveland. To this responsibility was added, in 1937, the sales management of the Agency and Specialties Division. He served in the dual capacity until 1939, when he returned to Mansfield as sales manager of the Merchandising Division.

Resigning from Westinghouse in 1942, Mr. Kohnstamm became executive vice president of the Vander Horst Corp. of America, operating plants in Lakewood, Ohio, and Olean, N. Y. In 1944 he joined Baldwin Locomotive Works, with which company he filled executive positions in both San Francisco and Philadelphia, resigning as manager of the Testing Equipment Division to take up his new duties with Jack & Heintz.



NORMAN SCHREIBER

New board chairman and general manager of the General Engineering & Mfg. Co. (Gemco), producer of air conditioning equipment.

Schreiber to Gemco --

(Concluded from Page 1, Column 2) The latter will continue to devote his full attention to the engineering improvement and product development.

The new board chairman was formerly president of Andrews Steel Co., Newport, Ky.; chairman of the board of Hardy Burlingham Mining Co., Newport; and general manager of Herring-Hall-Marvin Safe Co., Hamilton, Ohio, He holds directorates in four other industrial firms.

The new regional sales managers are M. W. Nerius, west coast; Chester H. Fox, north central; C. J. Le-Master, south central; Harry B. Osmundsen, northeast; and Charles J. Davis, southeast. They and a staff of assistants will work with the national distributor and dealer organization.

Gemco's heat pump is described as an improved and streamlined version of a test unit in a Glendale, Mo., residence. The test unit is said to have completed a year's operation with "completely favorable results."



A. H. ROSE

Appointed sales manager of Schaefer, Inc., manufacturer of low temperature cabinets.

Rose to Schaefer --

(Concluded from Page 1, Column 4) manager for the Moore Corp., Joliet, Ill., for five years assistant general sales manager for City Ice & Fuel Co., Cleveland. He rose from salesman to district manager for National Cash Register Co. in his early business life.

Schaefer, Inc. is planning a greatly accelerated manufacturing and selling program for its lines, the president of the firm stated.

Better Business Bureau Hits 'Fictitious' Trade-Ins--

(Concluded from Page 1, Column 4) spreads public distrust to all business advertising, he asserted.

The national bureau's investigations have turned up cases, he disclosed, that indicate manufacturers, wholesalers, and dealers are working together to foster "unrealistic" trade-

As "a clear case of a manufacturer setting an inflated list price," Mr. Willson cited a dealer in a large city who offered a \$30 trade-in allowance for old radios turned in on new FM-AM radio-phonograph combinations introduced by a name brand manufacturer.

His advertisement stressed "no quibbling over age, make, or condition." Only a short time prior to that, the manufacturer had advertised that combination in national magazines at \$30 higher than the dealer's price when the trade-in allowance was considered, Mr. Willson declared.

Straight price reductions disguised as trade-ins were discovered by a bureau representative who shopped a store in a large city that was offering a \$100 trade-in allowance on old radios turned in on a new model of another name brand manufacturer.

The clerk told the bureau's representative that it would not be necessary for him to produce his old radio.

"Few retailers wish to go into the second hand radio business," Mr. Willson asserted. Some dealers just go through the motions of accepting old radios as trade-ins. When they get them, they either throw them on the junk pile or give them to institu-

Mr. Willson stated that the na. tional bureau has already written letters to 30 radio manufacturers, asking their cooperation in ending this fictitious trade-in situation.

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The letter said, in part:

"This is a frank request to all radio manufacturers to avoid the use of 'phoney' trade-in allowances. By 'phoney' we mean any trade-in allow. ance offered for an old radio to disguise a price cut or inflated markup.

"Disguised trade-in offers are again being made by some dealers in co. operation with a manufacturer or jobber. Before any such trend develops we ask radio manufacturers to give serious consideration to the matter and decide whether pricing and references to price in advertising and selling of radio receivers is to put it bluntly-worthy of the public trust."

Of the replies received to date, Mr. Willson indicated, many denounced such trade-in allowances and pledged their support. Some claimed that their lines were not fair traded and they had no control over the dealer's pricing activities. A few declared forthright that if such practices be. came widespread, they would have to fall into line, even though reluctantly.

"I want to make it very clear." Mr. Willson stated, "that the bureau does not advocate the abandonment of all trade-in allowances.

"If a customer's receiver has value and there is a market for it, there is no reason why the dealer, if he so desires, should not buy the old receiver.

"In a bona fide deal, the retailer will offer a fair market price for such

DOUBLE COOLING CAPACITY revario 1 ACCUMULATORS STORE "PEAK-HOUR" COOLING IN OFF HOURS

You can add over 100% extra cooling capacity to your present system without changing your present high side equipment. McQuay ICY-FLO Accumulator stores "cold" during idle hours, on low power rates, when your compressor is normally shut down."Bonus" capacity, built up in one or more Accumulator sections during off hour periods, can be utilized later in hours of peak demand.

Manufactured in a standard size unit, the ICY-FLO Accumulator can be regulated to discharge at varying rates from 1 to 25 tons per hour. Besides adding low cost capacity to existing installations, McQuay "ICY-FLO" units now make it practical and economical to bring the advantages of air conditioning to applications where cooling is necessary only for short periods. Short hour cooling requirements are now being met in such installations as churches, mortuaries, specialty shops, restaurants, etc. Write McQuay for bulletin 105. Representatives in principal cities.

FOUR BANK ACCUMULATOR INSTALLATION





ALL NEEDED CONTROLS

FOUND IN THE CUTLER-HAMMER REFRIGERATION REPLACEMENT LINE

Sixty percent of all refrigeration control replacement requirements are met by one Cutler-Hammer control alone the Universal Replacement Unit. And where specific control is needed, that need is met by Exact Replacement control items in the C-H line, each individually packed, clearly labelled, complete with dial plate full instructions for mounting and adjustment.

The practical advantages gained are: less capital tied up in stock; rapid and regular turnover; speedier completion of each job; greater all-round satisfaction. And in each C-H Replacement unit you will find the results of a 50-year specialization that had led to acknowledged leadership in the control field. Thus, outstanding refrigeration wholesalers recommend C-H Replacement Control and alert service organizations everywhere feature and use it. CUTLER-HAMMER, Inc., 1362 St. Paul Ave., Milwaukee 1. Wisconsin.

Bul. 9521N9 > THIS ONE UNIVERSAL UNIT ALONE COVERS 60% OF ALL NEEDS ADJUSTABLE MOUNTING BRACKETS Maximum Mounting Centers . . . 4-3/16 Minimum Mounting Centers 2-3/16

Adjustable Cutout Feature—Differential can be increased 4 degrees by turning indicator in "Hi" direction and decreased 4 degrees by turning in "Lo" direction.

Adjustable Range—Turning screw clockwise lowers setting and counter-dockwise raises set-

Operating knob can be adjusted to meet various evaporator scale settings. New knob



normal cutout

is ideal for varying shield thicknesses. Makes this control adaptable to wider range of single dial replacement jobs where overload is not

CUTLER·HAMMER MOTOR CONTROL

DOMESTIC, SEMI-COMMERCIAL AND COMMERCIAL CONTROL